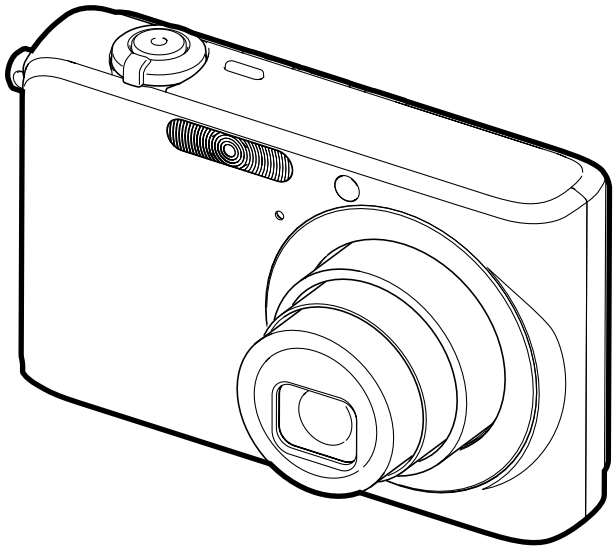
SERVICE MANUAL & PARTS LIST (without price)

EX-Z1000

MAY. 2006



■ Refer to the page 18 after changing the main PCB.

INDEX

CASIO

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SPECIFICATIONS

Image Files Format	Snapshots: JPEG (Exif Ver.2.2); DCF (Design Rule for Camera File system) 1.0 standard; DPOF compliant Movies: Motion JPEG AVI format Audio: WAV
Recording Media	Built-in Memory 8.0 MB SD Memory Card MultiMediaCard

Approximate Memory Capacity and File sizes

• Snapshots

Image Size (pixels)	Image Quality	Approximate Image File Size	Approximate Built-in Memory (8.0MB) Capacity	Approximate SD Memory Card* (256MB) Capacity
10M (3648 x 2736)	Fine	4.2 MB	1 Image	56 Images
	Normal	2.8 MB	2 Images	84 Images
	Economy	1.4 MB	5 Images	162 Images
3:2 (3648 x 2432)	Fine	3.8 MB	2 Images	62 Images
	Normal	2.5 MB	3 Images	93 Images
	Economy	1.25 MB	5 Images	180 Images
16:9 (3648 x 2048)	Fine	3.3 MB	2 Images	71 Images
	Normal	2.2 MB	3 Images	106 Images
	Economy	1.1 MB	6 Images	203 Images
5M (2560 x 1920)	Fine	2.8 MB	2 Images	84 Images
	Normal	2.0 MB	3 Images	116 Images
	Economy	1.0 MB	7 Images	221 Images
3M (2048 x 1536)	Normal	1.92 MB	4 Images	121 Images
	Economy	1.28 MB	5 Images	180 Images
	Economy	640 KB	11 Images	348 Images
2M (1600 x 1200)	Fine	1.17 MB	6 Images	196 Images
	Normal	780 KB	9 Images	286 Images
	Economy	390 KB	17 Images	530 Images
VGA (640 x 480) (VGA)	Fine	360 KB	20 Images	625 Images
	Normal	240 KB	30 Images	938 Images
	Economy	120 KB	57 Images	1742 Images

• Movies

Image Size (Pixels)	Maximum Recording Time Per File	Approximate Data Rate (Frame Rate)	Approximate Built-in Memory (8.0MB) Capacity	Approximate SD Memory Card* (256MB) Capacity
HQ 640 x 480	Until memory full	10.2 Megabits/second (25 frames/second)	6 seconds	3 minutes, 16 seconds
Normal 640 x 480	Until memory full	6.1 Megabits/second (25 frames/second)	10 seconds	5 minutes, 27 seconds
LP 320 x 240	Until memory full	2.45 Megabits/second (12.5 frames/second)	26 seconds	13 minutes, 35 seconds

* Number of image values are approximate and are provided for reference only.

* Based on Matsushita Electric Industrial Co., Ltd. products.
The number of images you can save depends on the type of memory card you are using.

* When using a memory card with a different capacity, calculate the number of images as a percentage of 256 MB.

Delete	1 file; all files (with memory protection feature)
Effective Pixels	10.1 million
Imaging Element	1/1.8 square pixel primary color CCD (Total pixels: 10.37 million)
Lens/Focal Distance	F2.8 to 5.4/f=7.9 to 23.7 mm (Equivalent to 38 to 114 mm on a 35 mm film camera.) Seven lenses in five groups, including aspherical lens.
Zoom	3X optical zoom / 4X digital zoom (Image Size: 10M (3648 x 2736 pixels)) (12X total zoom)
Focusing	Contrast Detection Auto Focus Focus Modes: Auto Focus, Macro Focus, Pan Focus (movie recording only), Infinity Mode, Manual Focus AF Area: Spot or Multi; with AF assist lamp
Approximate Focus Range (from lens surface)	Auto Focus: 40 cm to ∞ (1.3' to ∞) Macro Focus: 6 cm to 50 cm (2.4" to 19.7") Infinity: ∞ Manual Focus: 6 cm to ∞ (2.4" to ∞) Range is affected by optical zoom.
Exposure Control	Metering: Multi-pattern, center weighted, and spot by imaging element Exposure: Program AE Exposure Compensation: –2EV to +2EV (in 1/3EV steps)
Shutter	CCD shutter, mechanical shutter; snapshot (Auto): 1/4 to 1/2000 second * The shutter speed range may be different for some BEST SHOT scenes and sensitivity settings.
Aperture Value	F2.8/5.6* auto switching * Brightness converted * Using optical zoom causes the aperture value to change.
White Balance	Auto, fixed (6 modes), manual
Sensitivity	Snapshots (Standard): Auto, ISO 50, ISO 100, ISO 200, ISO 400 Snapshots (When “Anti Shake” setting is “Auto”): ISO 800 (maximum) Snapshots (When BEST SHOT scene is “Anti Shake”): ISO 800 (maximum) Snapshots (When BEST SHOT scene is “High Sensitivity”): ISO 3200 (maximum) Movies: Auto
Self-timer	Trigger Times: 10 seconds, 2 seconds, Triple Self-timer
Built-in Flash	Flash Modes: Auto, Off, On, Red-eye reduction Approximate Flash Range: Flash Range: Wide Angle Optical Zoom: 0.1 to 3.6 meters (0.3' to 11.8') Telephoto Optical Zoom: 0.4 to 1.9 meters (1.3' to 6.2') • Flash Continuous Shutter Wide Angle Optical Zoom: 0.6 to 2.1 meters (2.0' to 6.9') Telephoto Optical Zoom: 0.4 to 1.1 meters (1.3' to 3.6') * ISO Sensitivity: “Auto” * Depends on zoom factor.
Recording	Snapshots (with audio); Macro; Self-timer; Continuous Shutter; BEST SHOT; movie (with audio); audio (Voice Recording) * Audio is monaural.
Approximate Audio Recording Times	Audio Snapshot: 30 seconds per image After Recording: 30 seconds per image Voice Recording: 24 minutes (when using built-in memory)
Monitor Screen	2.8-inch TFT color LCD 230,400 (960 x 240) pixels
Viewfinder	Monitor Screen
Timekeeping Functions	Built-in quartz digital clock Date and Time: Recorded with image data Auto Calendar: To 2049
World Time	162 cities in 32 time zones City name, date, time, summer time
Input/Output Terminals	Cradle contact
USB	USB 2.0 Full-Speed compatible
Microphone	Monaural
Speaker	Monaural

Power Supply

Power Requirements Lithium ion rechargeable battery (NP-40) x 1

Approximate Battery Life

All of the values provided below represent the approximate amount of time under normal temperature (23°C (73°F)) before the camera turns off. These values are not guaranteed. Low temperatures shorten battery life.

Number of Shots (CIPA)*1	360 shots
Continuous Playback (Snapshots)*2	780 minutes
Continuous Movie Recording	195 minutes
Continuous Voice Recording*3	480 minutes

- Battery: NP-40 (Rated Capacity: 1300 mAh)
- Recording Medium: SD memory card
- Measurement Conditions

*1 Number of Shots (CIPA)
In accordance with CIPA standards
Normal temperature (23°C (73°F)), monitor on, zoom operation between full wide and full telephoto every 30 seconds, during which two images are shot with flash; power turned off and back on every time 10 images are shot.

*2 Continuous Playback Time
Standard temperature (23°C (73°F)), one-image scroll approximately every 10 seconds

*3 Approximate continuous recording time

- The above values are based a new battery, starting from a full charge. Repeated charging shortens battery life.
- Frequency of flash, zoom, and Auto Focus usage, and the time the camera is on greatly affects recording time and number of shots values.

Power Consumption	3.7 V DC; Approximately 3.6 W
Dimensions	92.0 (W) x 58.4 (H) x 22.4 (D) mm (3.6"(W) x 2.3"(H) x 0.9"(D)) (Excluding projections; 19.9 mm (0.8") at thinnest point)
Weight	Approximately 139 g (4.9 oz) (excluding battery and bundled accessories)
Bundled Accessories	Rechargeable Lithium Ion Battery (NP-40); USB Cradle (CA-33); Special AC Adaptor; USB Cable; AV Cable; Strap; CD-ROM; Basic Reference

Rechargeable Lithium Ion Battery (NP-40)

Rated Voltage	3.7 V
Rated Capacitance	1300 mAh
Operating Temperature	0 to 40°C (32 to 104°F)
Dimensions	38.5 (W) x 38.0 (H) x 9.3 (D) mm (1.53"(W) x 1.50"(H) x 0.37"(D))
Weight	Approximately 34 g (1.2 oz)

USB Cradle (CA-33)

Input/Output Terminals	Camera contact; USB port; external power supply terminal (DC IN 5.3 V); AV terminal (AV OUT: NTSC/PAL standards)
Power Consumption	5.3 V DC, Approximately 3.2 W
Dimensions	107 (W) x 17 (H) x 58 (D) mm (4.2"(W) x 0.7"(H) x 2.3"(D)) (Excluding projections)
Weight	Approximately 59 g (2.1 oz)

Special AC Adaptor (Inlet Type) (AD-C52G)

Input Power	100 to 240 V AC 50/60Hz 83 mA
Output Power	5.3 V DC 650 mA
Dimensions	50 (W) x 20 (H) x 70 (D) mm (2.0"(W) x 0.8"(H) x 2.8"(D)) (excluding projections, excluding cable)
Weight	Approximately 90 g (3.2 oz)

Special AC Adaptor (Plug-in Type) (AD-C52J)

Input Power	100 to 240 V AC 50/60Hz 83 mA
Output Power	5.3 V DC 650 mA
Dimensions	50 (W) x 18 (H) x 70 (D) mm (2.0"(W) x 0.7"(H) x 2.8"(D)) (excluding projections, excluding cable)
Weight	Approximately 90 g (3.2 oz)

Power Supply

- Use only the special NP-40 rechargeable lithium ion battery to power this camera. Use of any other type of battery is not supported.
- This camera does not have a separate battery for the clock. The date and time settings of the camera are cleared whenever power is totally cut off (from both the battery and USB cradle). Be sure to reconfigure these settings after power is interrupted.

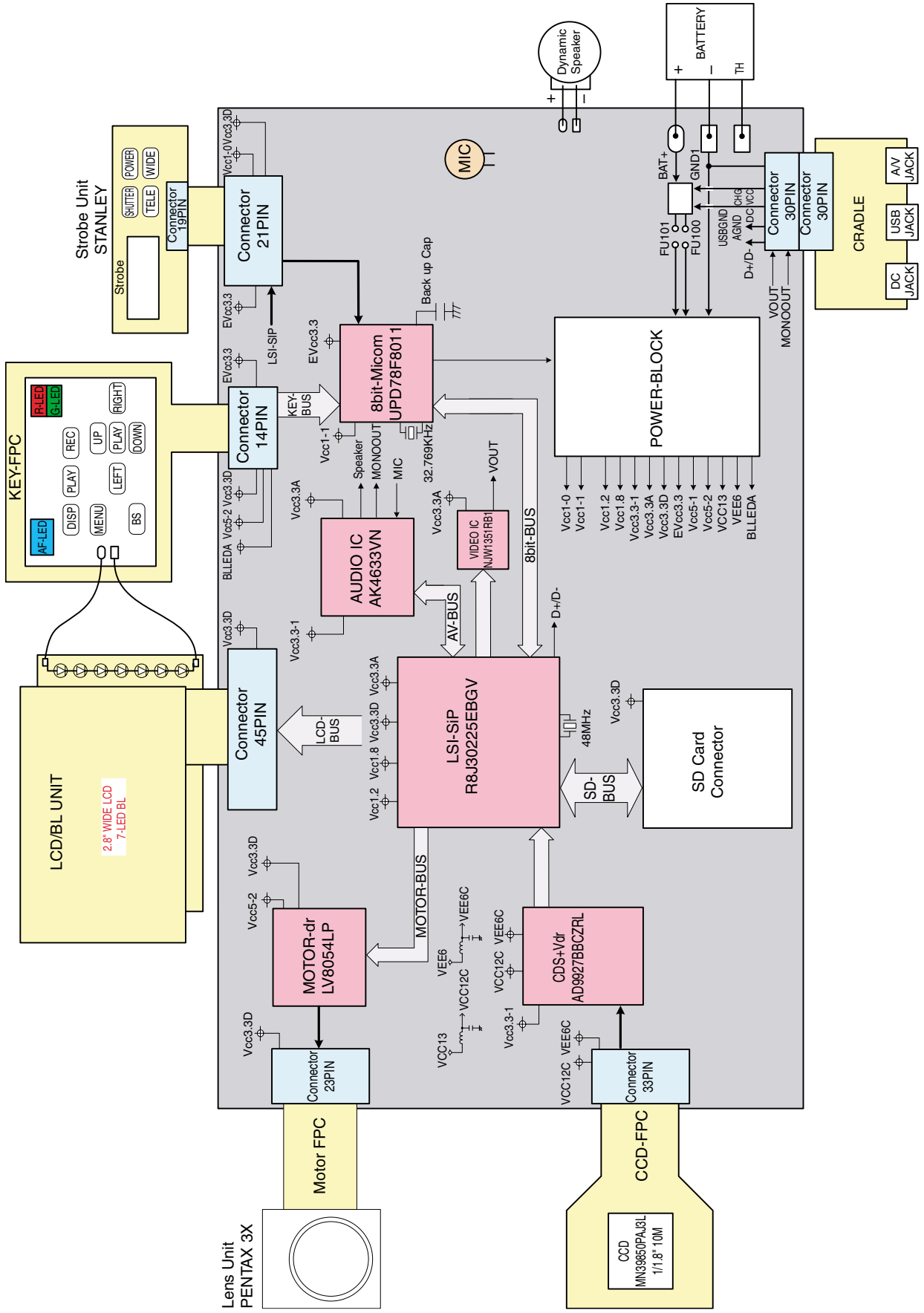
LCD Panel

- The LCD panel is a product of the latest LCD manufacturing technology that provides a pixel yield of 99.99%. This means that less than 0.01% of the total pixels are defective (they do not turn on or always remain turned on).

Lens

- You may sometimes notice some distortion in certain types of images, such as a slight bend in lines that should be straight. This is due to the characteristics of lens, and does not indicate malfunction of the camera.

BLOCK DIAGRAM

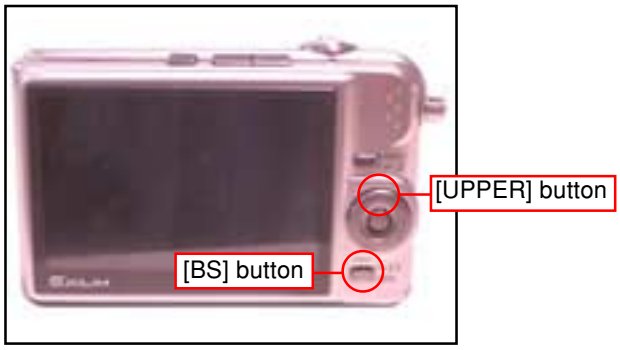


TEST MODE

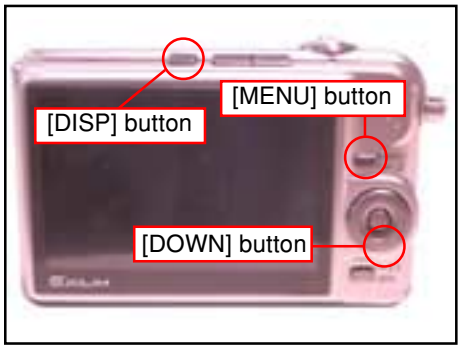
Note: Never perform the menu items unless otherwise instructed. Doing so may cause destruction of the data inside, which will make the camera unusable.

■ To boot the test mode

1. While firmly pressing down both [BS] and [UPPER], turn the power on.



2. After the version appears, press buttons in the order of [DOWN], [DOWN], [DISP] and [MENU] in 0.5 second. The diagnostic menu appears.




```
        ++ KX800 ++
Ver 1.01
```

"DOWN" button -> "DOWN" button -> "DISP" button -> "MENU" button

```
  1  :VERSION INFO
* 2  :USB TCC TEST
  3  :ROM UPDATE
  4  :LAST MEMORY
  5  :FORMAT
```

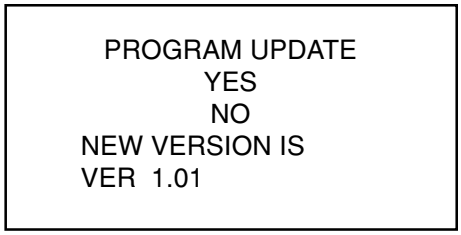
"SET" button

```
* 1 :USB TCC ON
  2 :USB TCC OFF
  3 :USB STORAGE
  4 :USB SPEED
```

"MENU" button

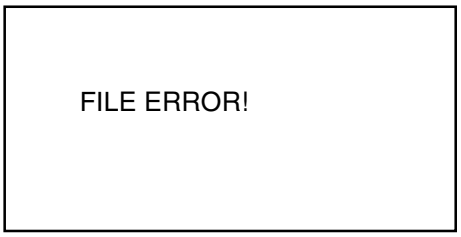
PROGRAM VERSION UPGRADING

1. To update the firmware version
   1. Prepare the memory card which contains the firmware for EX-Z1000 in the root directory.
      EX-Z1000.bin
   2. Insert the above memory card into the camera, and set a fully charged battery in the camera.
   3. Press the [power button] while holding [MENU] depressed. Keep holding [MENU] depressed until "PROGRAM UPDATE" appears in the display.
      • The following appears.
      • The version of the firmware in the memory card appears at the bottom of the display.



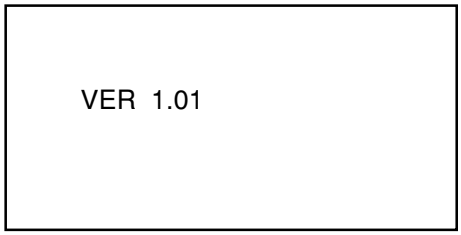
(As of May 2006)

NOTE 1) When a wrong software is mistakenly used, the message below appears. Update the firmware again with the correct software.



NOTE 2) When only the version appears in the display even though you are trying to operate the camera, charge the battery to the fullest and try again. The level of the battery indicator should be highest in order to update the firmware.

   4. Align the white cursor to [YES] by [UPPER] and [DOWN], and then press [SET].
      • "NOW LOADING" appears in the display and the update starts.
   5. "COMPLETE" appears after the update finishes.
   6. Remove the memory card after turning the power off once. Turn the power back on again while holding [MENU] depressed, and check the version.
      • "VER.1.01" appears.



(As of May 2006)

   7. If the version is correct, turn the power off.
   8. Finally, check the operation by recording, playing back and deleting an image.

2. How to restore the firmware

1. Prepare the firmware restoration program and change its name as follows;

   rom800_060512.lbn → titan.bin

   NOTE: This software and procedure automatically restores the firmware even if the firmware belongs to a wrong model code. Make sure to use the correct software for the correct model.
2. Copy the above file to the root directory in the memory card.
3. Insert the memory card into the camera.
4. Set a fully charged battery in the camera.

   NOTE: This software and procedure automatically restores the firmware even if the battery capacity of the camera is low. Make sure to use a fully charged battery to prevent the danger of power down during firmware restoration.
5. Turn the power on while pressing the [shutter release] button.

   If the power does not turn on only by pressing the power button, insert the battery while holding the [shutter release] button depressed.

   • The LED next to the optical viewfinder changes from “green/red blinking”, “green blinking” to “green steady”.

   NOTE: This software and procedure automatically restores the firmware even if the firmware belongs to a wrong model code. Make sure to use the correct software for the correct mode.
6. When the LED becomes “green steady”, the firmware restoration is finished.

   Remove the battery and the memory card, and then turn the power off.
7. Turn the power on again while holding [BS] and [UPPER] depressed.

   Check the model name and the program version (PR:) in the opening screen of the test menu.

   ++KX-800++

   Ver 1.01
8. If the model name and the program version are correct, perform SYSTEM INITIAL to initialize the system area.

   “BS + UPPER + PW ON” → “DOWN, DOWN, DISP, MENU” → “3:ROM UPDATE” → “5:SYSTEM INITIAL”

   NOTE: After SYSTEM INITIAL is performed, “SYSTEM ERROR” appears when the power is turned on again.
9. Write the latest firmware. (Refer to page 6)

   After the firmware is written, check the model name and the program version (PR:) in the opening screen of the test menu.
10. Finally, start the camera normally to check the operation by recording, playing back and deleting an image. Check also that the colors in the images are not too bright or two dark.

3. To install the firmware

Initially, firmware is not installed in the PCB supplied by the parts center.

Install the firmware into the PCB after replacing with a new one as shown in the procedures below.

Note: The camera does not operate (only LED becomes “green blinking”) if the firmware is not installed in the PCB.

<Writing the restoration program 1>

1. Copy the following software to the root directly of the SD card.

   Restoration software: rom800_060512.lbn

   Firmware: EX-Z1000.bin
2. Change the name as follows;

   “rom800_060512.lbn” to “titan.bin”
3. Insert the SD card into the camera.
4. Insert the battery while holding the [shutter release] button depressed.

   The LED next to the optical viewfinder changes from “green/red blinking”, “green blinking” to “green steady”.
5. When the LED becomes “green steady”, remove the battery and turn the power off.

<System Initialize>

1. Boot the test mode.
2. Press [DOWN] twice and then press [DISP], [MENU].
3. Select “3: ROM UPDATE” and then press [SET].
4. Select “5: SYSTEM INITIALIZE” and then press [SET].
5. When the following message appears, press [SET].

   SYSTEM INITIALIZE

   START….

   PUSH OK KEY?
6. The system initialize is executed. Turn off the power when “SUCCESS” appears.

   * “SYSTEM ERROR” appears when the camera is turned off without system initialize.

<Writing the firmware>

1. Turn the power on while holding [MENU] depressed.
2. When “PROGRAM UPDATE” appears, select “YES” and then press [SET].
3. “NOW LOADING” appears while the firmware is updated.
4. When “COMPLETE” appears, the firmware update is complete.
5. Turn the power on and off to check if the camera normally functions. If there is no problem, the firmware update is successful.

ADJ TOOL

■ Introduction

Make sure to perform the adjustment by the USB ADJ Tool “adj03SSAW.exe” when replacing the lens unit or the PCB.
Here the necessary software, driver and setting are explained to use “adj03SSAW.exe”.
Note that the tool, drivers etc. are available only for Windows.

1. Preparation

1-1. Prepare the necessary software, driver and DLL file.

1) Prepare the following three files.

• Testmode driver

[testmode_driver] folder
- uusbd.dll
- uusbd.inf
- uusbd.sys

* testmode_driver_2.0] is for Windows except Windows98.

* [testmode_driver] is for Windows98 only.

• ADJ tool, USB DLL and ADJ setting file

[adj03SSAW] folder
- adj03SSAW.exe (ADJ tool itself)
- uusbd.dll (USB DLL)
- * .adt (ADJ setting file. Sorted by models)

2) Place the testmode driver in an appropriate place.

3) Place all of ADJ tool, USB DLL and ADJ setting file in the same folder.

1-2. Set the camera so that it recognizes the USB test mode.

1) Enter the test menu.
Turn the power on while pressing both [BS] and [UPPER].
Press [DOWN], [DOWN], [DISP] and [MENU].

2) Move the cursor to “2: USB TCC TEST” and press [SET].

3) Move the cursor to “1: USB TCC ON” and press [RIGHT], [RIGHT] and [SET].

4) USB TCC ON is now active. Turn the power off.

5) The test menu appears first when the camera power is turned on.
* When changing the USB TCC ON to OFF, set “2: USB TCC OFF” in the test menu.

1-3. Install the USB driver for the USB test mode in the computer.
(The following is an example using the Windows Me.)

1) Prepare the USB driver for the USB test mode.

2) Turn the camera power on which is set in the USB test mode as shown in 1-2 and let it enter the USB test mode directly (the test menu appears right after the power is turned on).

3) Connect the camera in the above status to the computer by the USB cable.

4) The “Add new hardware” wizard appears.

5) Check “Designate the place for the driver (for users with sufficient knowledge)” and press “Next”.

6) Check “Search for the optimum driver for the device (recommended)”.

7) Check “Designate the place to search”, designate the place which contains “inf” file in the driver by pressing “Reference” button, and then press “Next” button.
8) When “Universal USB Driver (VMEM manufacturer’s name)” appears upon message “Searching for the driver file for the following devices”, press “Next” button.
9) The file copy starts.

   (If a message “uusbd.inf cannot be found” appears during the file copy, designate the same place as in the step 7).
10) Press “Complete” button.
11) Right-click “My computer”, select “property”, and then open “Device manager”.

    If “Universal USB Driver (VMEM manufacturer’s name)”,“USB device for UUSBD” can be found, the computer has successfully recognized the driver.
12) Installing the test driver into either one enables the other one to recognize it.

    * How to uninstall the USB driver for the USB test mode
    - Connect the camera to the computer while in the USB test mode so that the computer recognizes the camera.
    - Right-click “My computer”, select “Property” and open “Device manager”.
    - Select “USB device for UUSBD” , and then “Universal USB Driver (VMEM manufacturer's name)”.
    - Press “Delete” button to delete the driver.
    - When using Windows98/98SE/Me, delete the following three files;

      (NOTE! Do NOT delete “usbd.inf” and “usbd.sys”, whose names are much alike the following.)

      C:windows / inf / uusbd.inf

      C:windows / inf / other / KashiwanoUUSBD.inf

      C:windows / system32 / drivers / uusbd.sys
    - The driver has been successfully deleted.

1-4. Use the USB ADJ Tool

1) Prepare ADJ tool, USB DLL and ADJ setting file in the same folder.
2) Turn the camera power on which is set in the USB test mode and let it enter the USB test mode directly (the test menu appears right after the power is turned on).
3) Boot “adj03SSAW.exe” and use it as follows;
   - To read ADJ data from the camera

     → Press “READ ($9)”.

     There is no neto set the model by “FW Item Set”.
   - To write ADJ data into the camera

     → Press “WRITE ($8)”.
   - To save ADJ data which is read

     → Select “File” and “Save All ADJ”, and save it under an appropriate name.
   - Open ADJ data which is saved

     → 1. Select the model by "FW Item Set", and then press "Load FW ->" button.

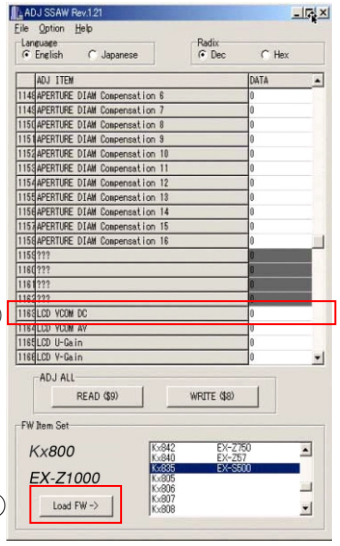
     2. Select “File” and “Open”, and open the necessary file.
   - Language” radio button can switch the language between Japanese and English in which the name of the ADJ ITEM is displayed.
   - “Radix” radio button can switch the data display between decimal and hexadecimal notations.

2. How to use ADJ Tool when replacing Lens unit
Make sure to perform the following procedure after replacing the lens.
A floppy disk with the lens data is bundled in the spare parts of the lens unit.

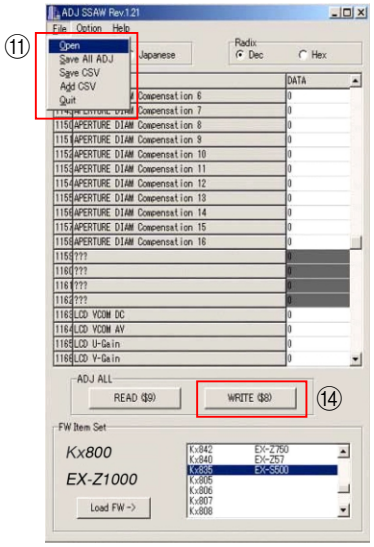
① Enter the TEST mode.
1. Turn the power on while pressing both "BS" and "UP" buttons.
2. Press "DOWN" button, "DOWN" button, "DISP" button, and "MENU" button while the program version is displayed.
3. Select "2.USB TCC TEST", and press "SET" button.
4. Select "1. USB TCC ON", and press "RIGHT" button, "RIGHT" button and "SET" button.
5. Turn the power OFF.

② Connect the camera to the computer by the USB cable.
③ Boot "adj03ssaw" .
④ Select the model name and click "Load FW → " Key.
• EX-Z1000
⑤ Click "ADJ ALL READ", and display the data on the "adj03ssaw".
⑥ Find the No.1163, "LCD VCOM DC".

⑦ Write down this value(data).
⑧ Replace the Lens unit.
⑨ Perform the above ① to ③.



⑩ Select the model name and click "Load FW → " Key.
• EX-Z1000
⑪ From "File/Open", open the bundled floppy disk, and transfer the data to the "adj03ssaw".
⑫ Find the No.1163,"LCD VCOM DC"
⑬ Change the data to the former value.(Refer to ⑦).
⑭ Click "WRITE" button of "ADJ ALL".
⑮ After adjustment, change "1. USB TCC ON" to "2. USB TCC OFF".



3. How to use ADJ Tool when replacing MAIN PCB

Firmware is not installed in spare parts.

① Enter the TEST mode.
   1. Turn the power on while pressing both "BS" and "UP" buttons.
   2. Press "DOWN" button, "DOWN" button, "DISP" button and "MENU" button while the program version is displayed.
   3. Select "2.USB TCC TEST", and press "SET" button.
   4. Select "1. USB TCC ON", and press "RIGHT" button, "RIGHT" button and "SET" button.
   5. Turn the power OFF.

② Connect the camera to the PC by the USB cable.

③ Boot "adj03ssaw".

④ Select the model name and click "Load FW → " Key.
   • EX-Z1000

⑤ Click "ADJ ALL READ", and display the data on the "adj03ssaw".

⑥ Save the data.

⑦ Replace the MAIN PCB.

⑧ Writing the Firmware.
   Write the firmware into a spare part after replacing one.

NOTE: If a battery is inserted without the firmware, only LED blinks green and the camera does not operate.

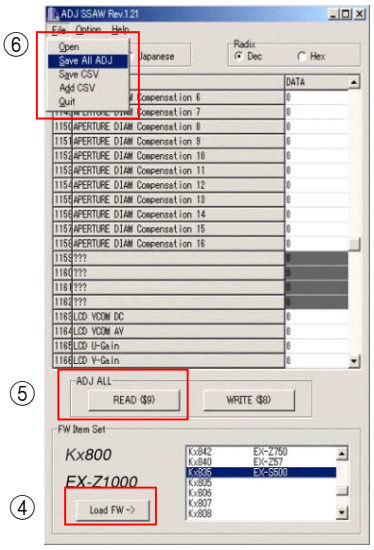
⑨ Perform the above ① to ③.

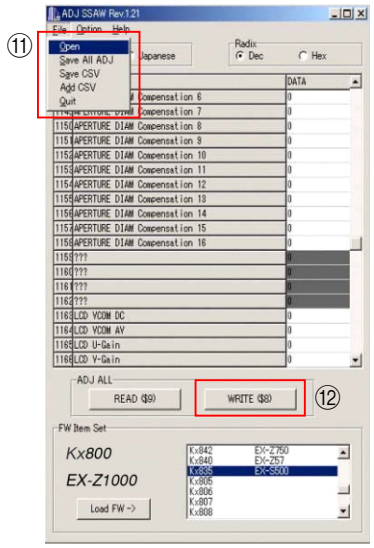
⑩ Select the model name and click "Load FW → " Key.
   • EX-Z1000

⑪ Open the file which is saved above, and display the data on the "adj03ssaw".

⑫ Click "WRITE" button of "ADJ ALL".

⑬ After adjustment, change "1. USB TCC ON" to "2. USB TCC OFF".





VCOM DC ADJUSTMENT

■ Purpose

Readjust the VCOM value to minimize the flicker of the LCD after replacing the LCD or the main PCB.

■ Necessary tools

1. Camera (Charge its battery fully)
2. Photo diode (S2281-01) : See Fig 1.
3. Photo sensor amp (C2719) : See Fig 2.
4. BNC-BNC cable (E2573) x 2 : See Fig 3.
5. 9-volt alkaline battery (6LR61Y) x 2 : See Fig 4.
6. Oscilloscope

■ Preparation

1. The three tools can be obtained from the following global site.
   Photo diode (S2281-01)
   Photo sensor amp (C2719)
   BNC-BNC cable (E2573)

   www.hamamatsu.com/

2. 9-volt alkaline battery is a standard one, but can be obtained from the following global site as well.

   www.panasonic.co.jp/global/

Fig1 Photo Diode (S2281-01)

Fig2 Photo Sensor Amp (C2719)

Fig3 BNC-BNC Cable (E2573)

Fig4 6LR61Y

■ Procedure

1. Camera setting

a) Turn the power on while pressing “BS” and “UPPER”.
After pressing “DOWN” key twice, press “DISP” and “MENU”.
Select "2:USB TCC TEST", and press "SET" button.
Select "1:USB TCC ON", and press "RIGHT" button ,"RIGHT" button and "SET" button.
Figure (a) appears.

Figure (a)

```
* 1: VERSION INFO
  2: USB TCC TEST
  3: ROM UPDATE
  4: LAST MEMORY
  5: FORMAT
  6: HARD TEST
  7: IMAGE TEST
  8: ADJ TEST
  9: TEST SCRIPT
```

b) Select “8 : ADJ_TEST” and then press SET.
(See Figure (b).)

Figure (b)

```
* 1: ADJ STAT CLR
  2: LCD
  3: LENS
     .
     .
     .
```

c) Next, select “2. LCD” and then press SET.
(See Figure (c).)

Figure (c)

```
* 1:VCOM  OK
     .
     .
     .
```

d) Pressing SET causes the right figure to appear.
(See Figure (d).)

Figure (d)

```
OK -> RegisterWrite

   VCOM = 0xca
```

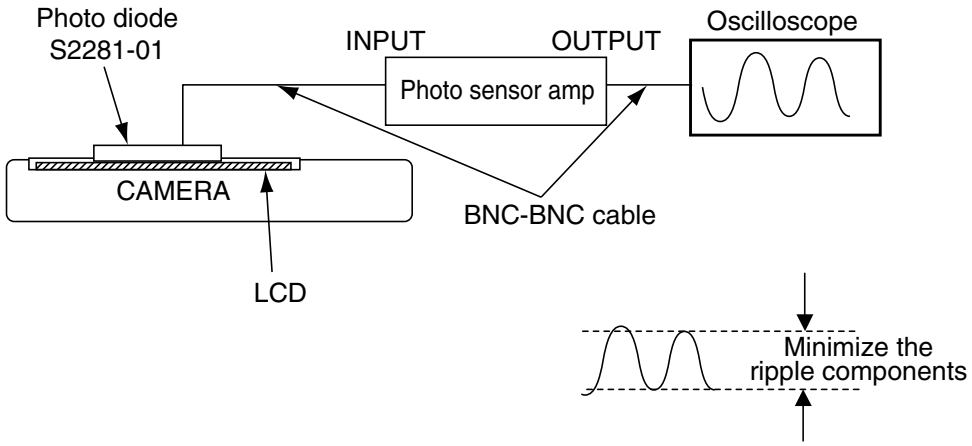
This value is an example and differs by products

2. Connecting the TOOL

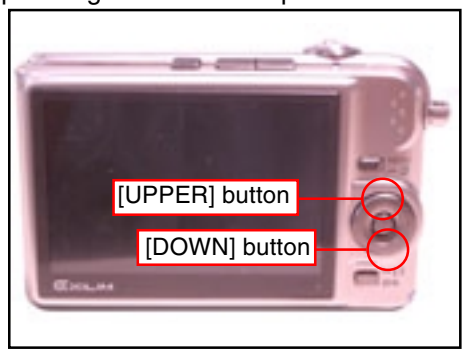
a) Place two 9-volt alkaline batteries in C2719.
b) Connect the output terminal of C2719 to the channel terminal of the oscilloscope by the BNC-BNCcable.
c) Connect the input terminal to the Photo Diode by the BNC cable.
d) Turn the oscilloscope and C2719 on.
* Pull the ON/OFF switch of C2719 this way and raise/lower it. (See below Figure.)

3. Measurement

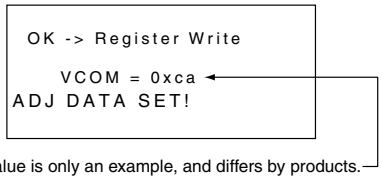
a) Connect S2281-01 to the camera's LCD monitor (see below).
AC Waveforms appear on the monitor screen of the oscilloscope.
* Change the Rf range of C2719 in case the range does not match.



b) After AC waveforms of the oscilloscope appear, minimize it by pressing the camera's up/down buttons (see the picture).
Make sure to visually check if it has been minimized.



After it has been minimized, press SET key.
The screen in the right figure appears and the new VCOM is written (VCOM adjustment is finished.).



Return to the previous display by pressing MENU or PW key.

CURRENT CONSUMPTION

(1) Current consumption (DC in = 3.80 ± 0.1 [V])
- Make sure that current consumption is less than 230 mA in PLAY mode.
- Make sure that current consumption is less than 440 mA in REC mode.
- Make sure that current consumption is less than 300 μA when power is turned OFF.

(2) The battery indicator changes according to the voltages as follows.
- DC in = less than 3.70 ± 0.02 V: (PLAY mode)
- DC in = less than 3.60 ± 0.02 V: (PLAY mode)
- DC in = less than 3.50 ± 0.02 V: (PLAY mode)

THE COUNTERMEASURE FOR "SYSTEM ERROR"

System error may occur when the battery is removed while data is written to the internal memory.

■ **PROCEDURE**

1. Initialize the system.
   a) Enter the TEST mode.
   b) Select "3:ROM UPDATE" and press SET button.
   c) Next, select "5:SYSTEM INITIAL" and press SET button.
   d) The following message appears.
      SYSTEM INITIALIZE
      START ...
      PUSH OK KEY?
   e) Press SET button and System is initialized.
      "SUCCESS !" appears on the monitor.

2. Write firmware.
   Refer to the "1. To update the firmware version" on page 7.
   Write the firmware.
   If the TEST mode boots automatically, change "USB TCC ON" to "USB TCC OFF".

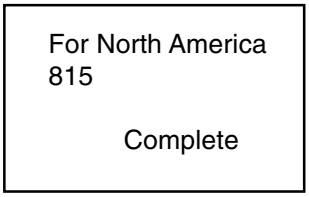
   Replace the Main PCB if the camera does not recover.

RESETTING THE PLACE OF DESTINATION

When the main PCB is replaced, the setting of the destination will be changed, therefore resetting is required. However, when the firmware is changed or fixed, the setting of the destination will be held, therefore resetting is not required.
Use the destination setting script to change the destination flag as instructed below.

1. Have an SD card ready that have a corresponding script (autorun.scp) under the root directory.
2. Insert the SD card in the camera and turn on the power.
   The script is located at Qv/soft/Adj_soft/exz1000/Script in the service CD-ROM.
3. After a few seconds, one of the following messages will be shown in the screen.
   The system will change the destination flag and turn off the camera automatically.

For North America

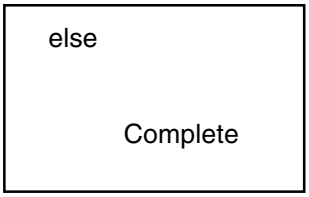


- Number of menu languages: 10 languages
- eBay scene compatible

For Europe and UK

- Number of menu languages: 10 languages
- Movie filming time limited

For others

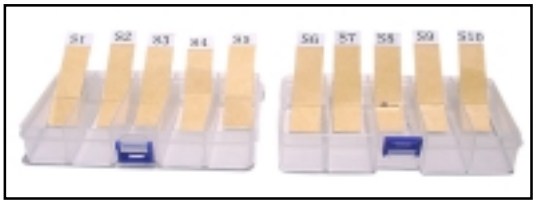


- Number of menu languages: 10 languages

4. Remove the SD card from the camera and turn on the power to confirm if the camera is set as you wish including the number of the menu languages and the scene of the best shot mode.
   If there is no problem, the setting is completed.

DISASSEMBLY

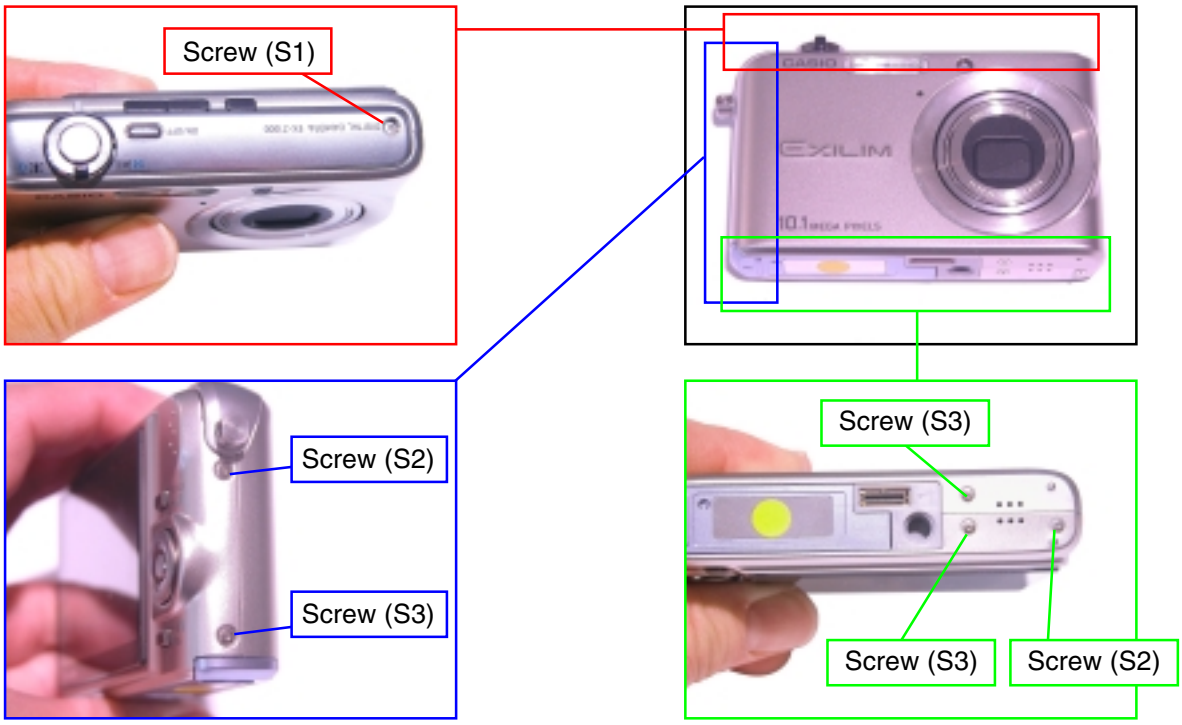
* Make sure to use correct screws when assembling since there are several kinds of them.
  It is a good idea to sort them as shown in the right when disassembling.



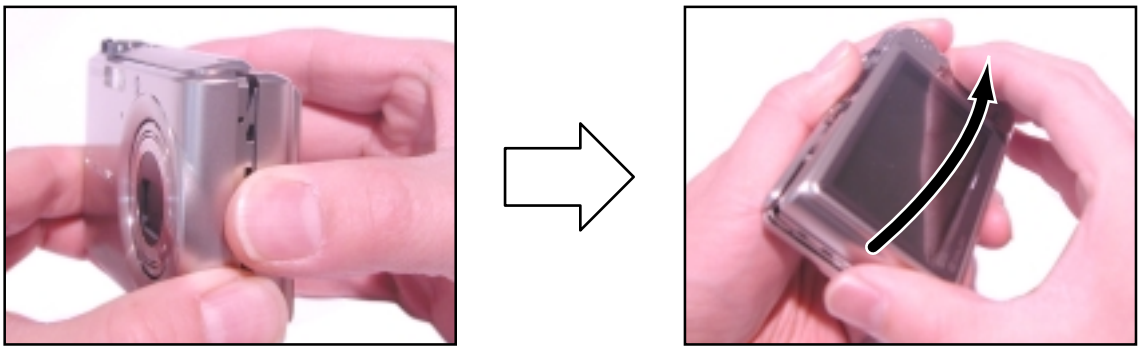
1. Remove the battery.

■ Remove the case

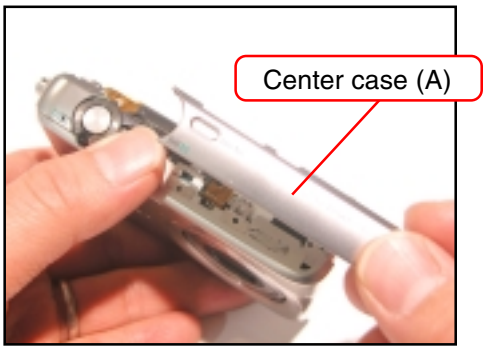
2. Remove six screws.

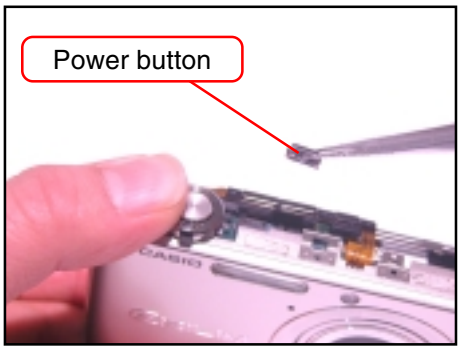


3. Remove the rear case assy.

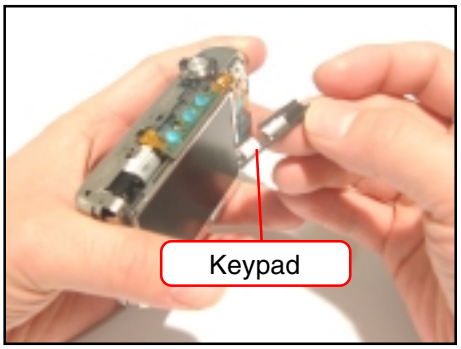


4. Remove the center case (A) and the power button.
   Note: Make sure not to lose the power button.

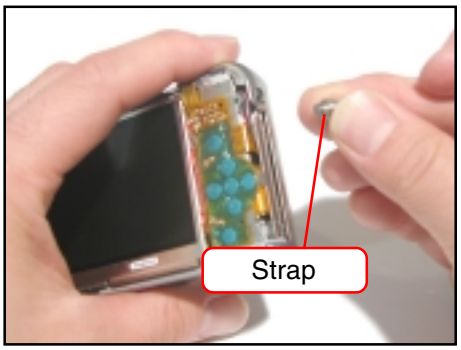


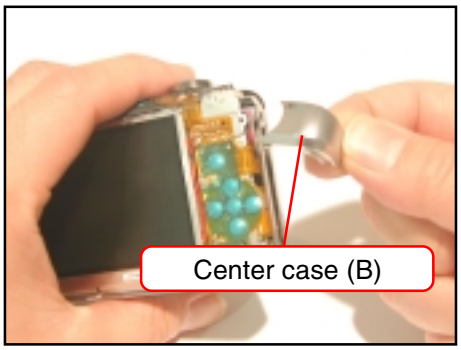


5. Remove the keypad.

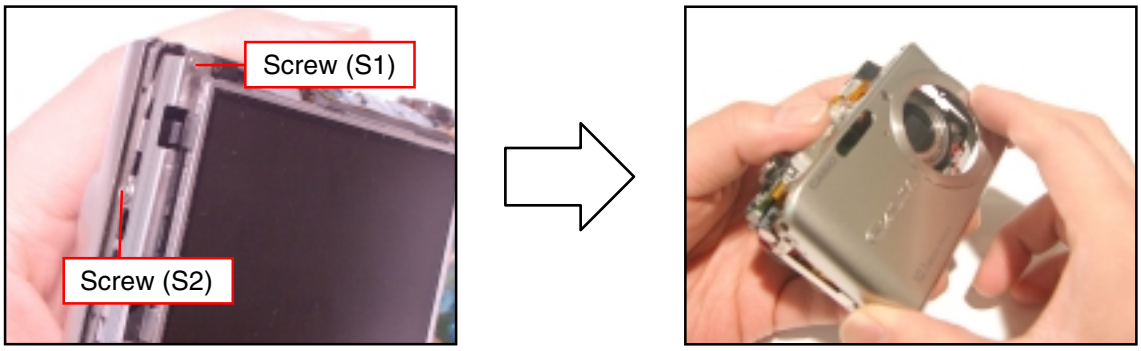


6. Remove the strap and the center case (B).

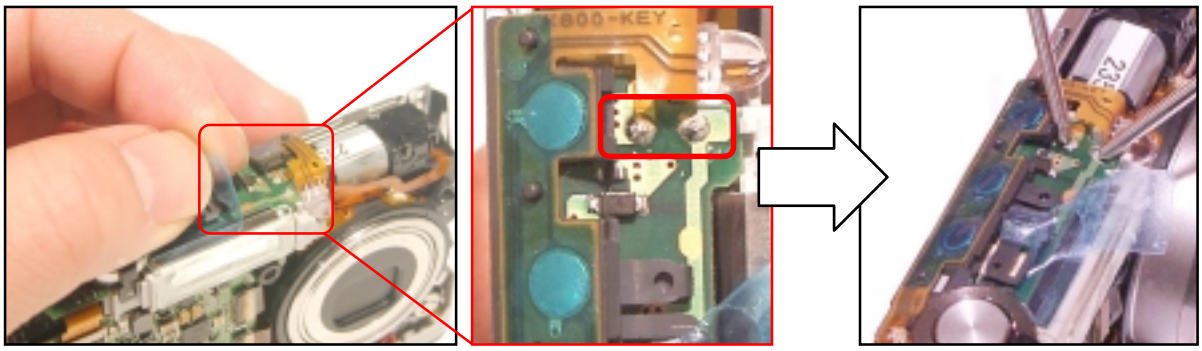




7. Remove two screws and then remove the front panel assy.

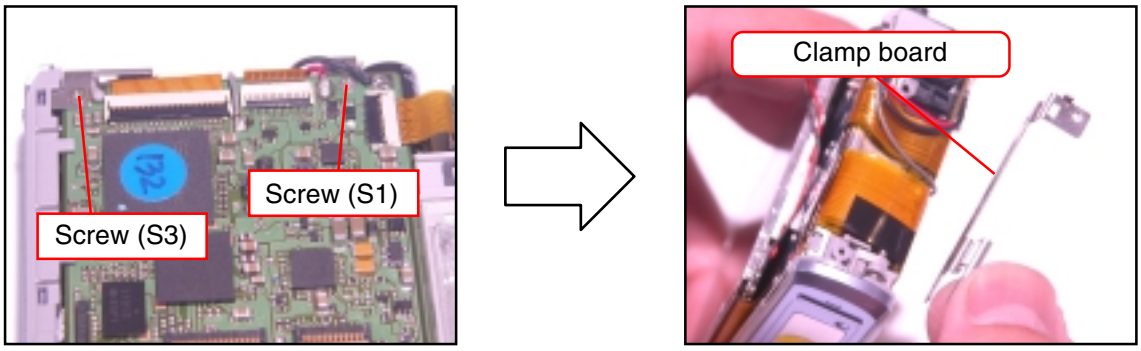


Note: Discharge the strobe condenser.

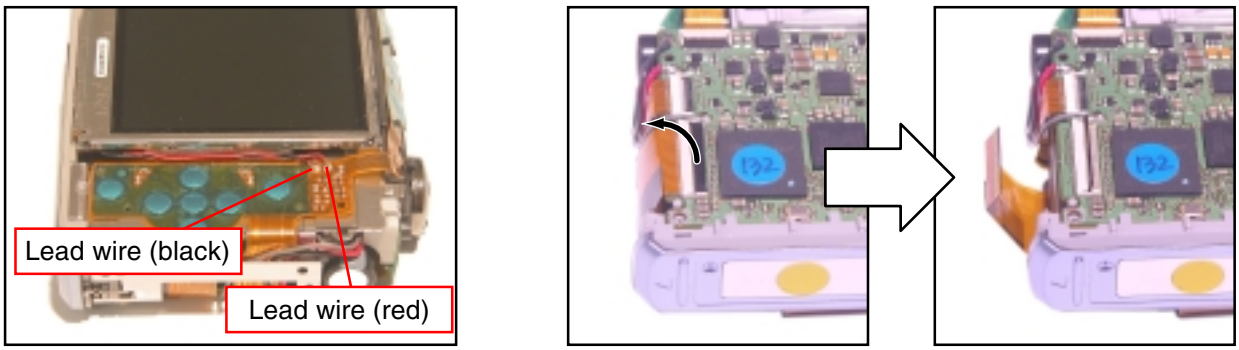


■ Removing the LCD

8. Remove two screws and then remove the clamp board.

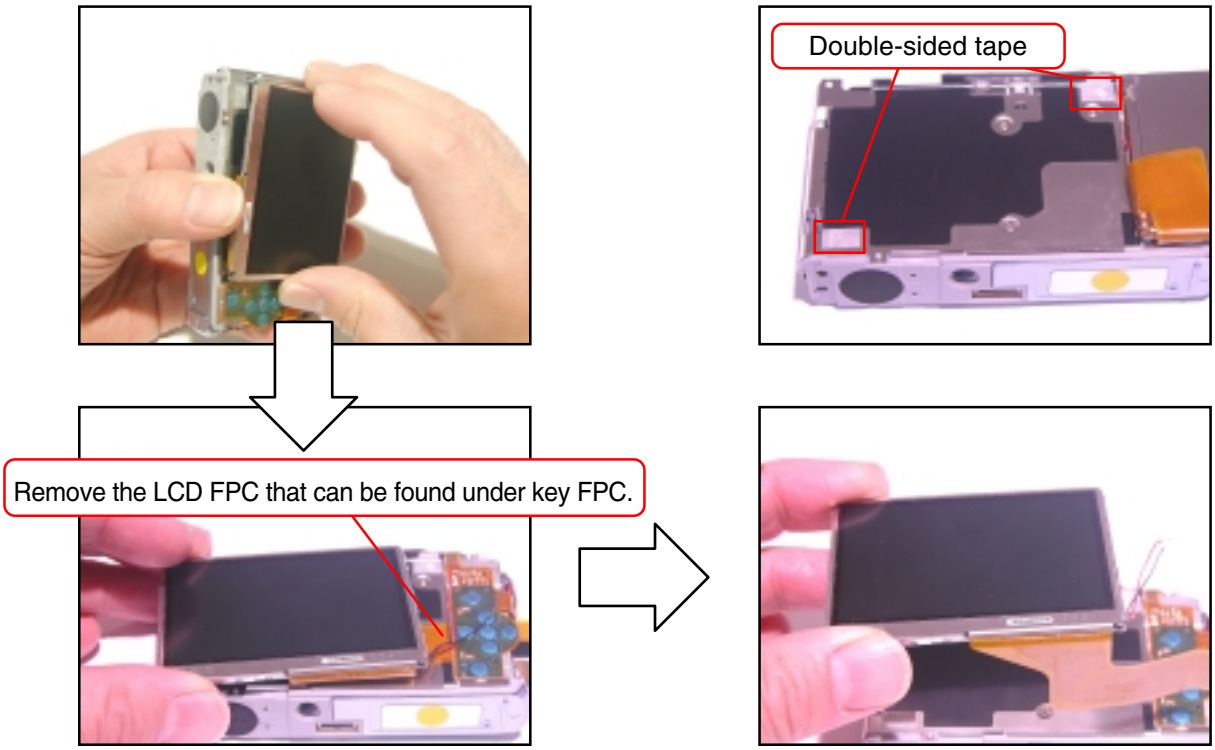


9. Unsolder to remove two lead wires.
10. Release the connector lock and remove the FCP.



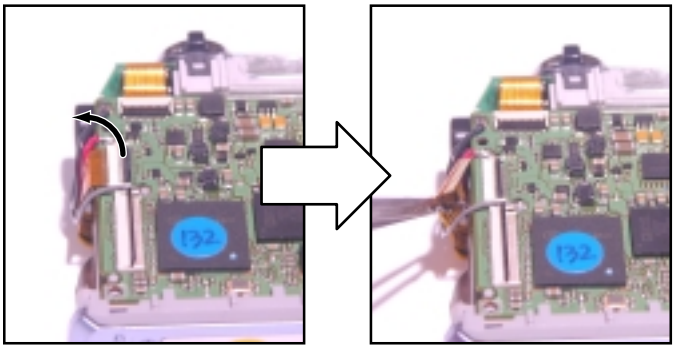
11. Remove the LCD.

* Fixed with double-sided tape.

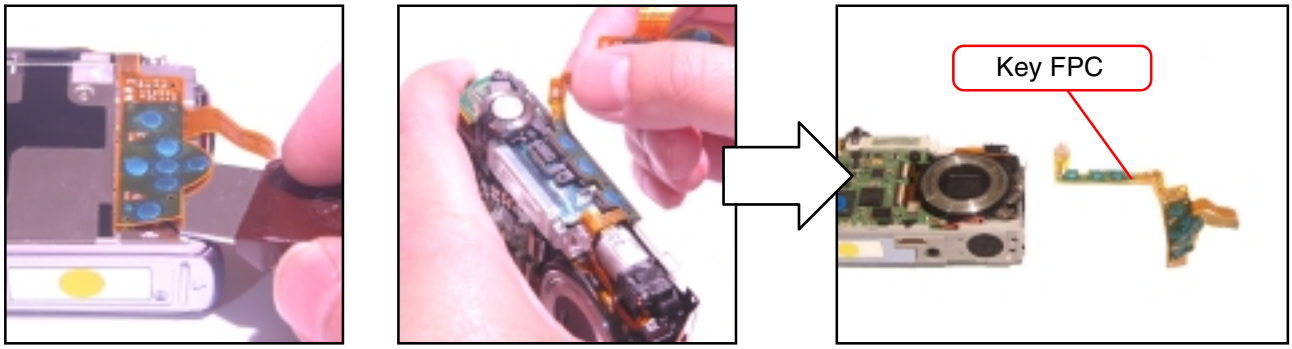


■ Removing the key FPC

12. Release the connector lock and remove the FCP.



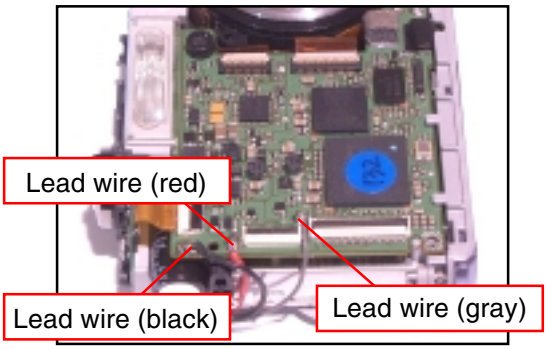
13. Remove the key FPC.

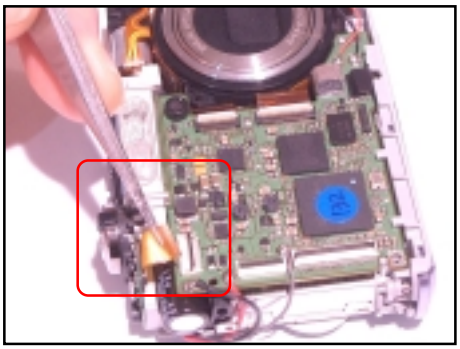


■ Removing the strobe assy

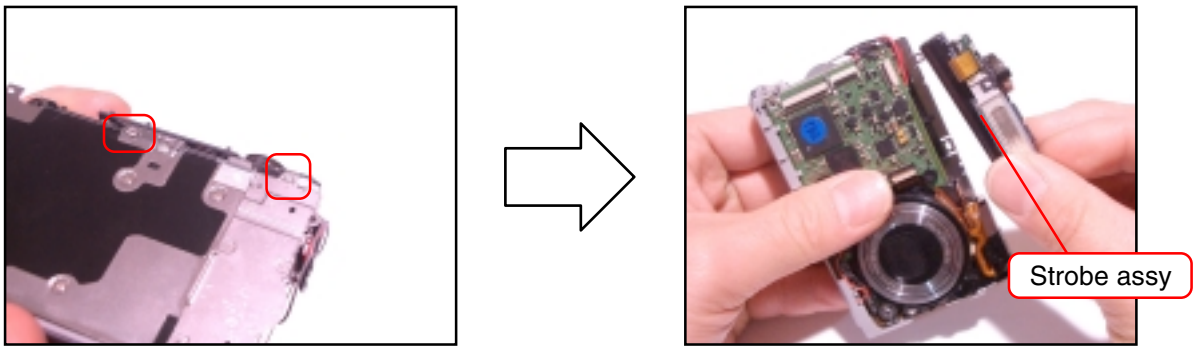
14. Release the connector lock and remove the FCP.

15. Unsolder to remove two lead wires.

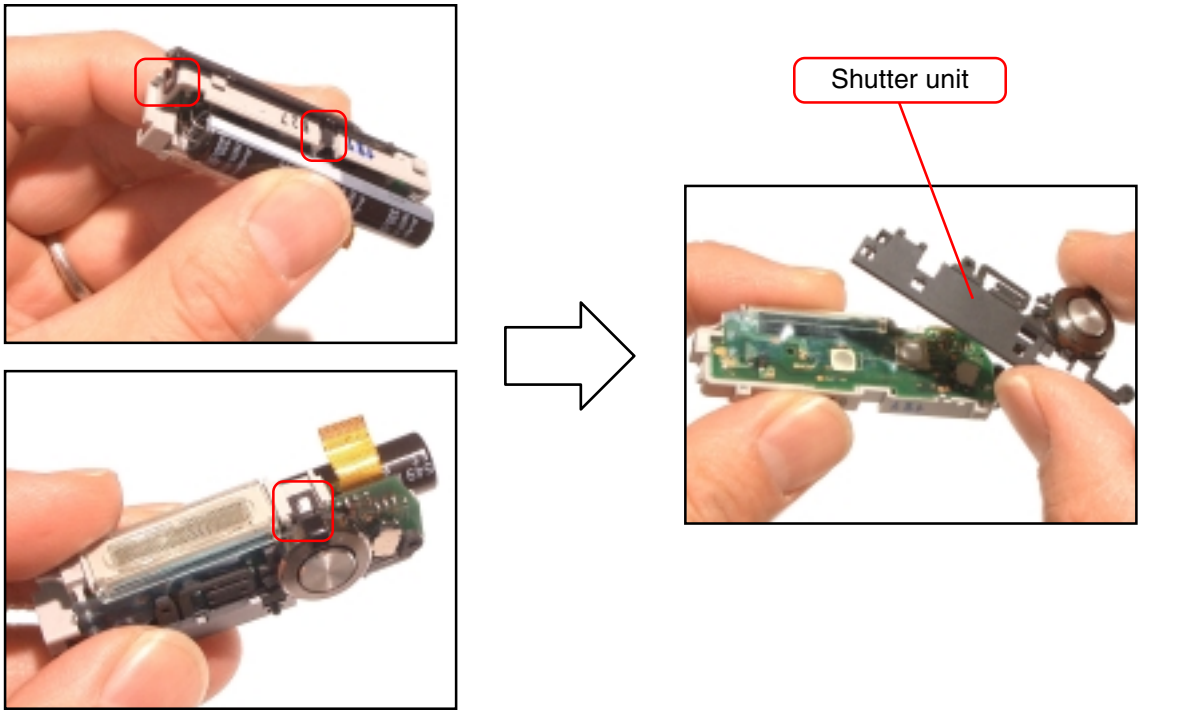




16. Remove two hooks, and then remove the strobe assy.



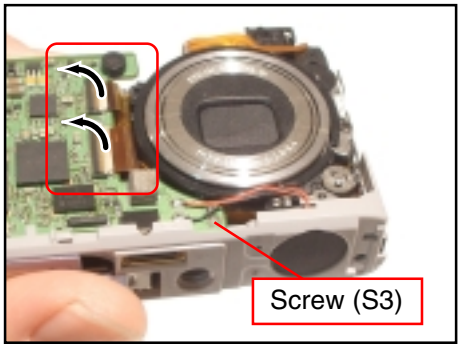
17. Remove three hooks, and then remove the shutter unit.

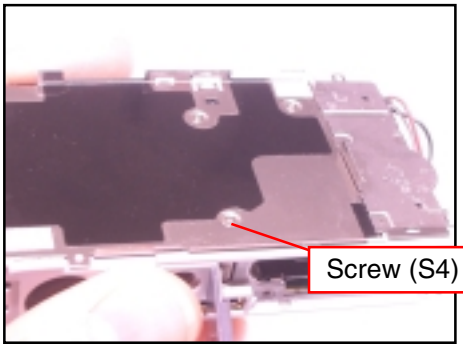


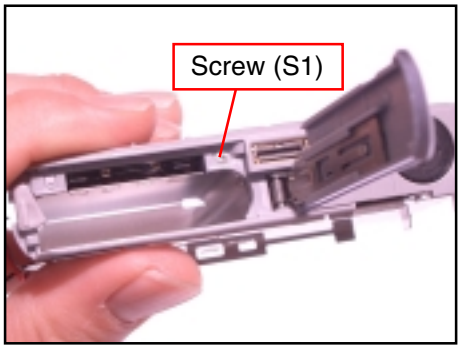
■ Removing the mail PCB and the bottom sub assy

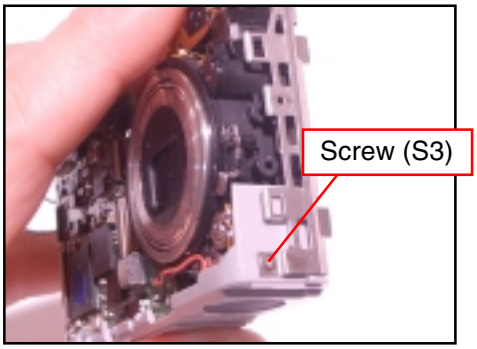
18. Release the connector lock and remove two FCP.

19. Remove four screws.

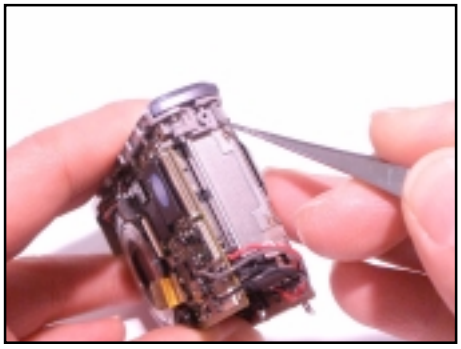


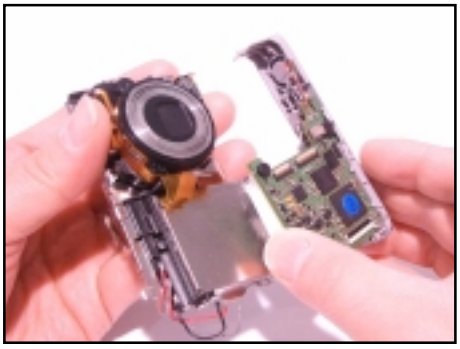




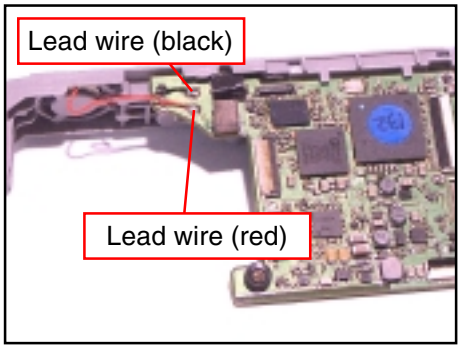


20. Remove the hook, and then remove the mail PCB and the bottom sub assy.

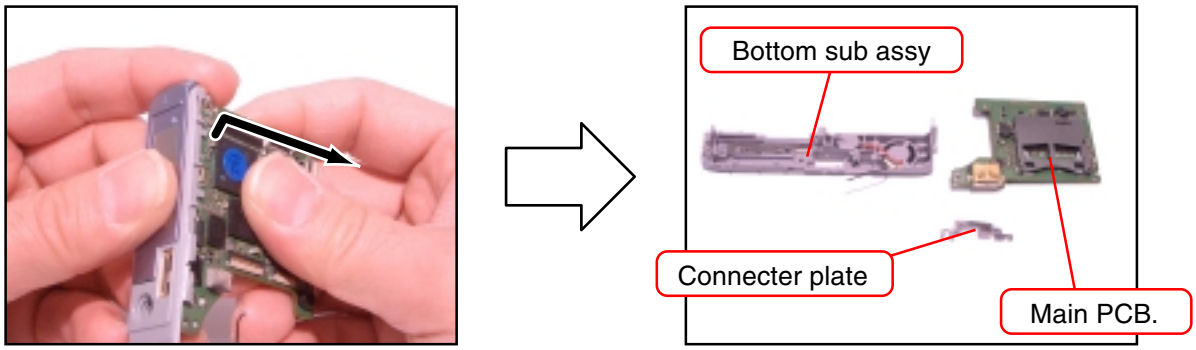




21. Unsolder to remove two lead wires.

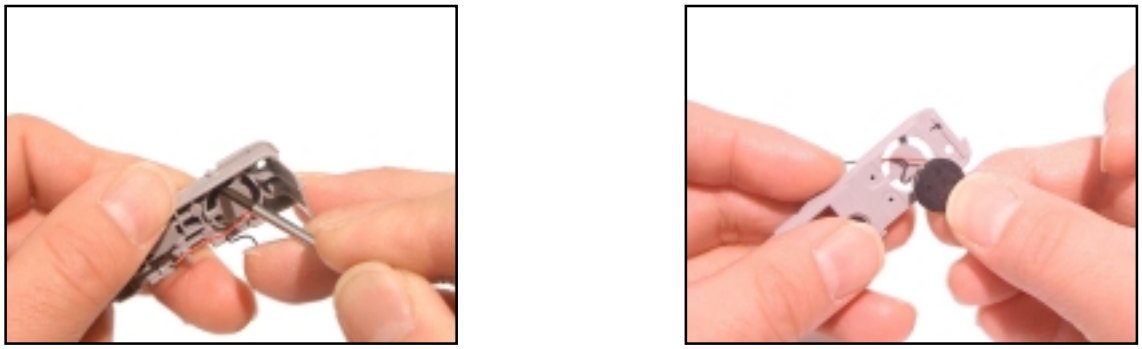


22. Remove the bottom sub assy.



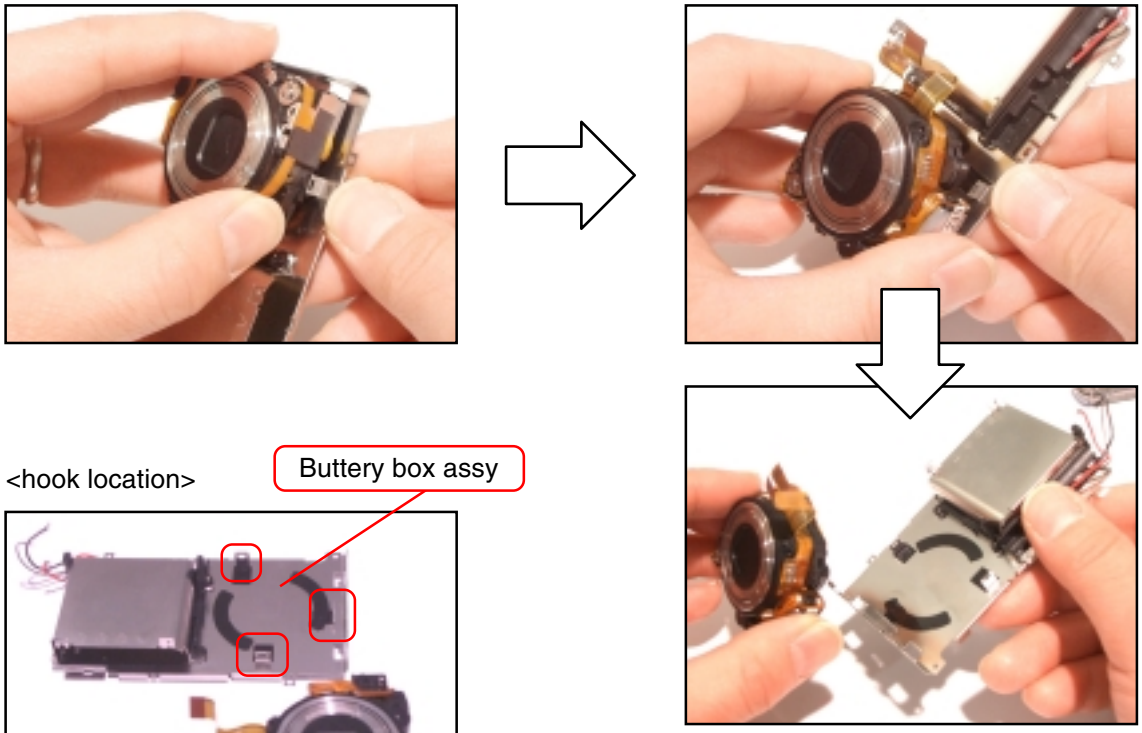
23. Remove the speaker.

* Fixed with double-sided tape.



■ Removing the lens unit.

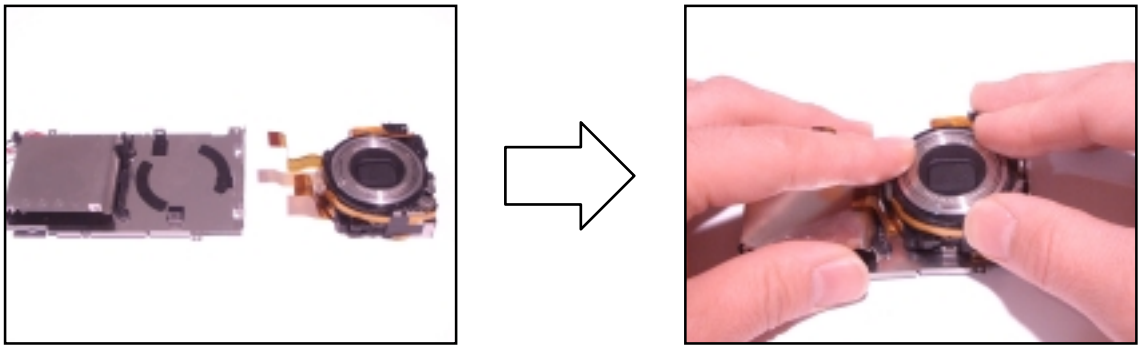
24. Remove two hooks, and then remove the lens unit.



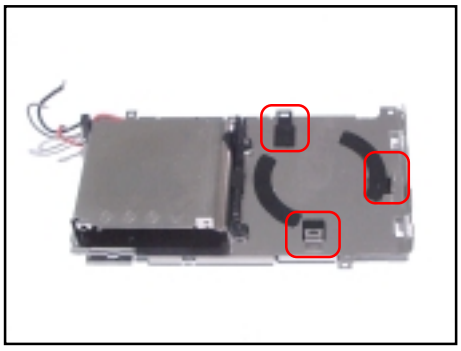
ASSEMBLY

■ Assembling the lens unit

1. Set the lens unit and fix it with three hooks.



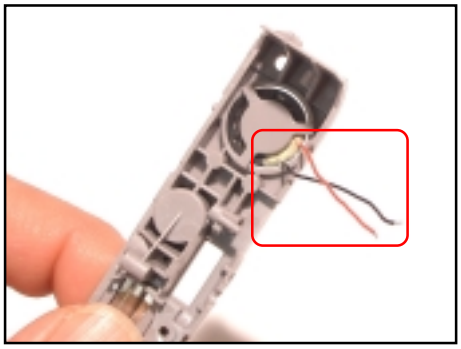
<hook locations>



■ Assembling the speaker

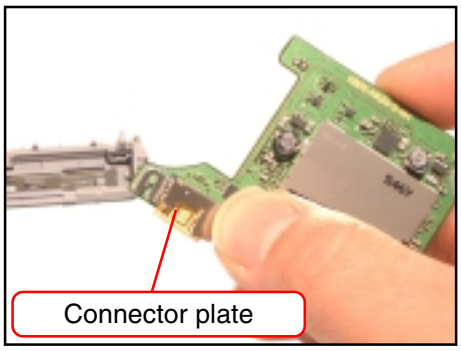
2. Set the lens unit and fix it with three hooks.

* Pay attention to the lead wire positions.

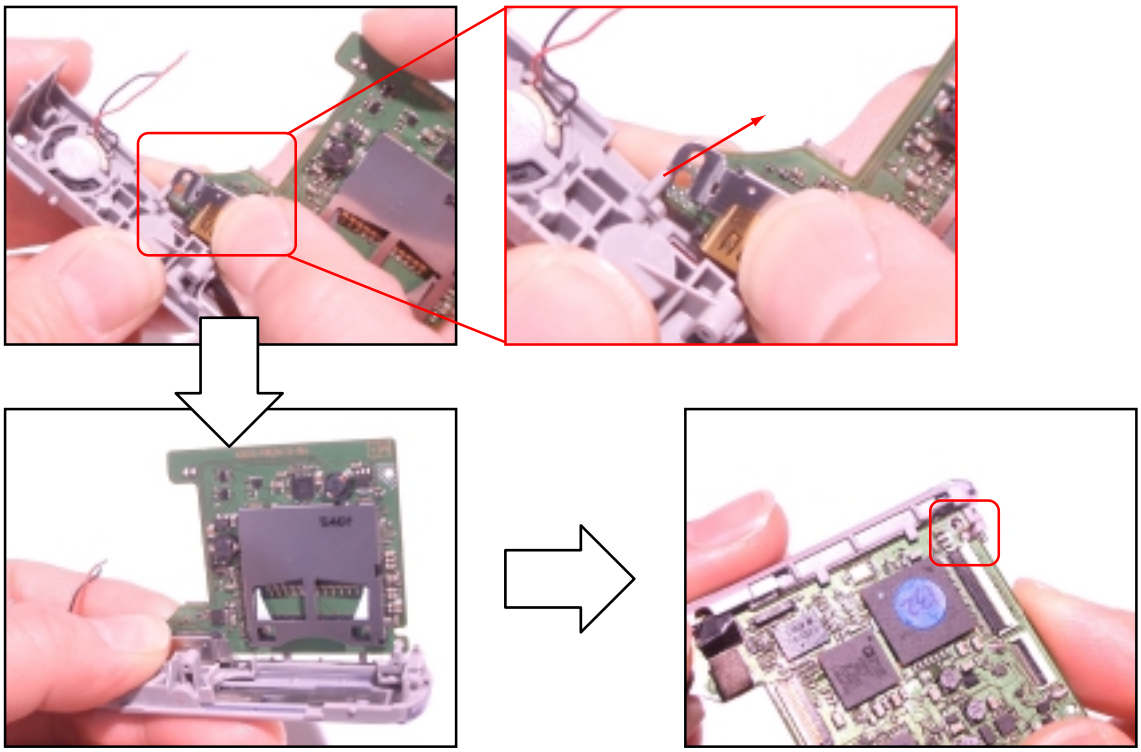


■ Assembling the main PCB and the bottom sub assy

3. Set the connector plate.



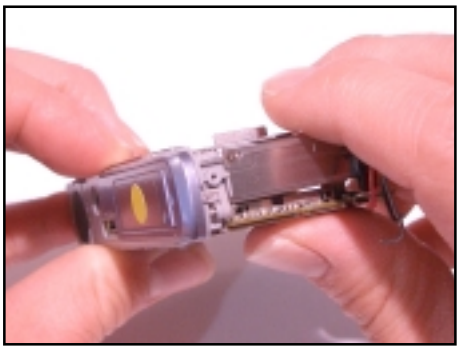
4. Set the main PCB.



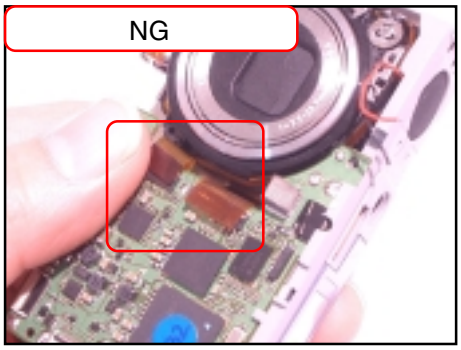
■ Assembling the buttery box assy

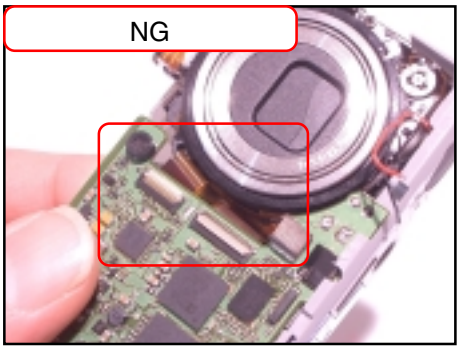
5. Set the connector plate.

<hook location>

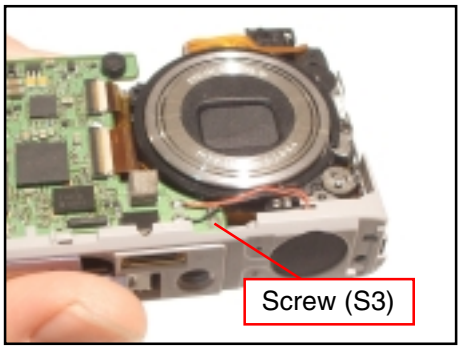


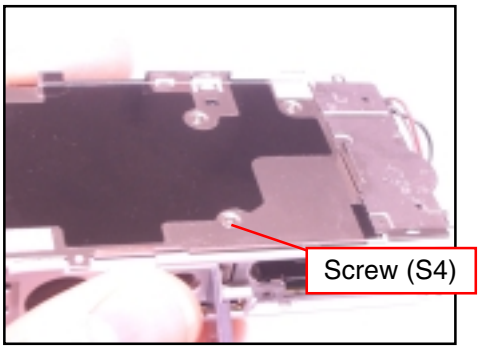
* Place two FPCs above.

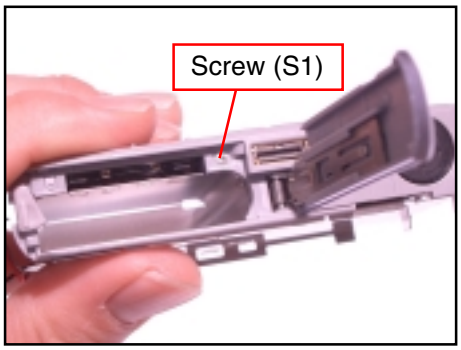


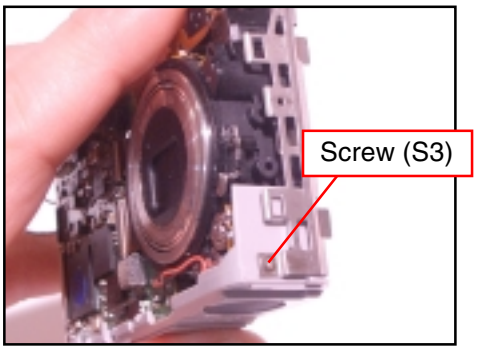


6. Fix it with four screws.

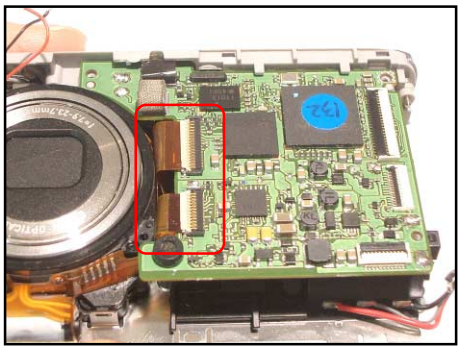




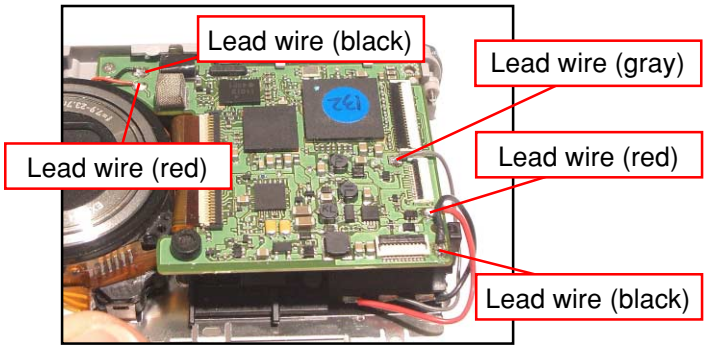




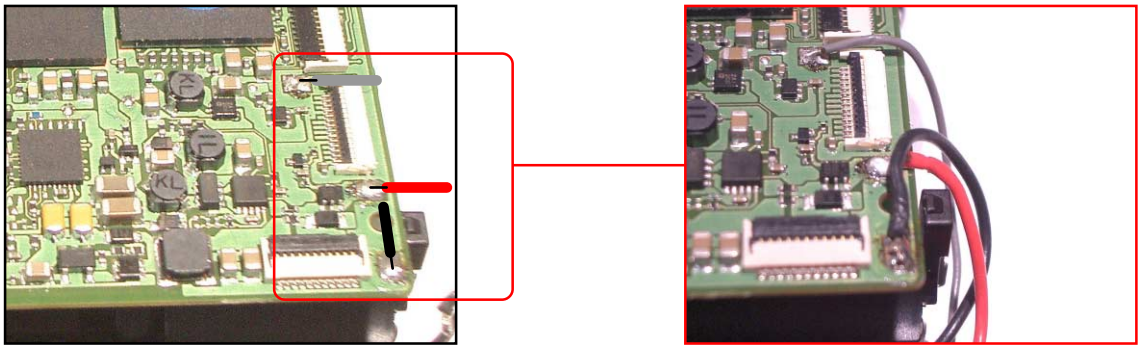
7. Insert two FPCs.



8. Solder five lead wires.



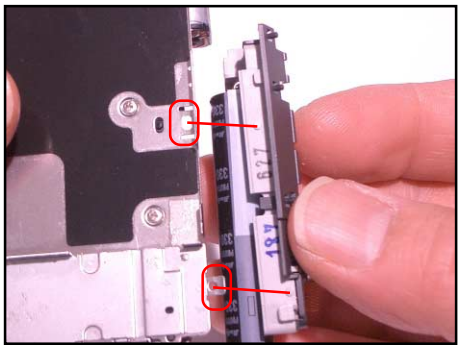
* Make sure to place to the right directions when soldering lead wires.



■ Assembling the strobe assy

9. Set the strobe assy and fix it with the hook.

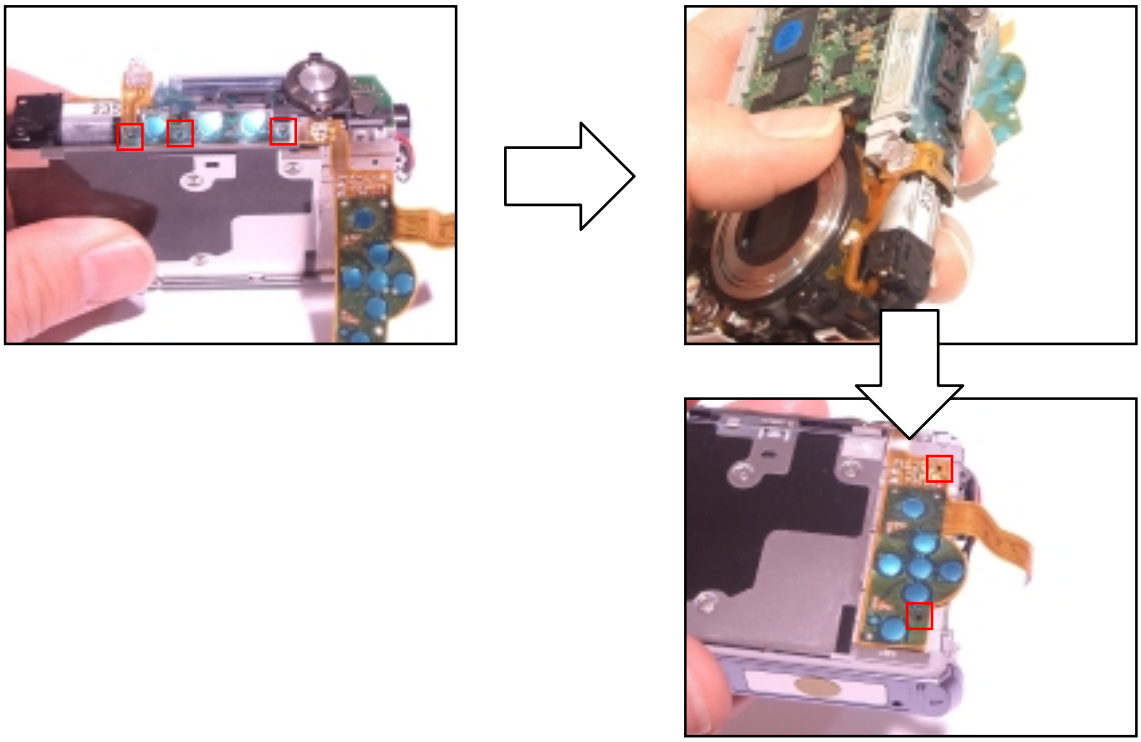
* Positioning guides.



■ Assembling the key FPC

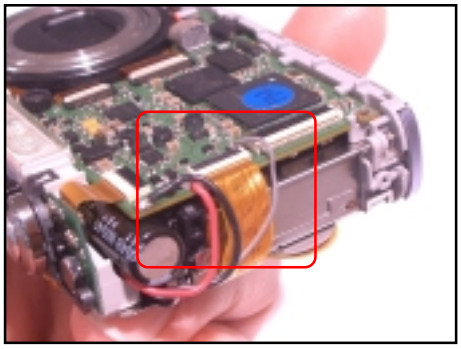
10. Set the key FPC.

* Positioning guides



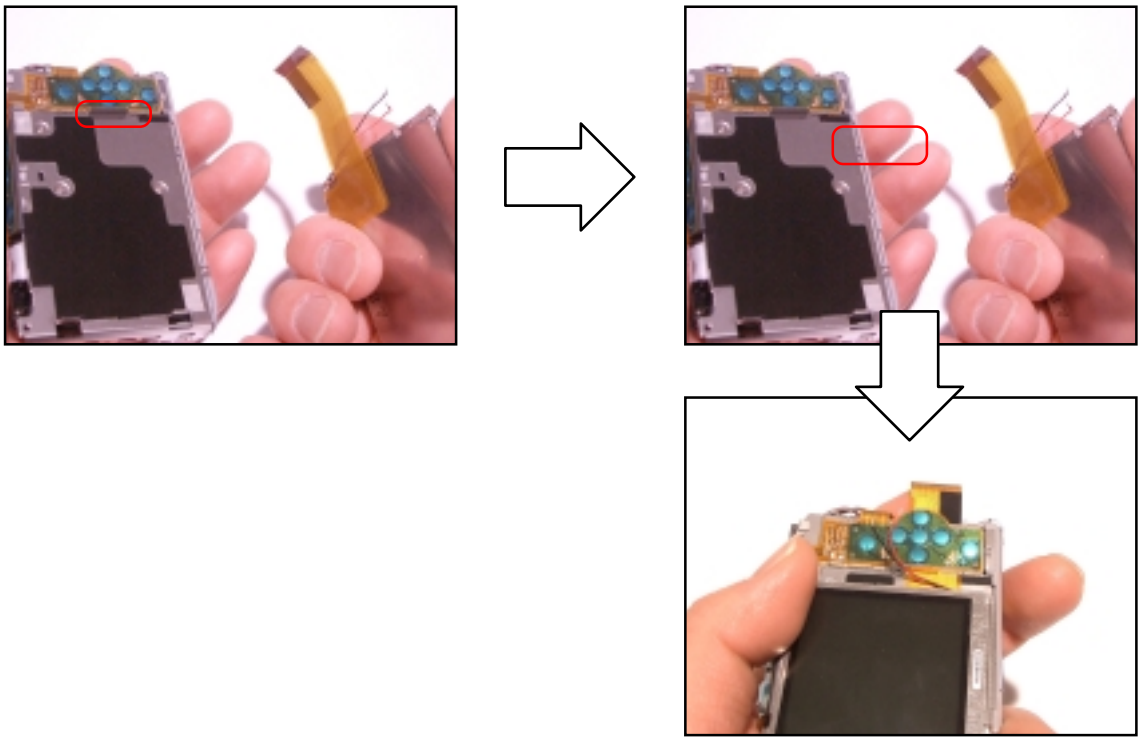
11. Insert one FPC.

* FPC should be placed under the lead wires.

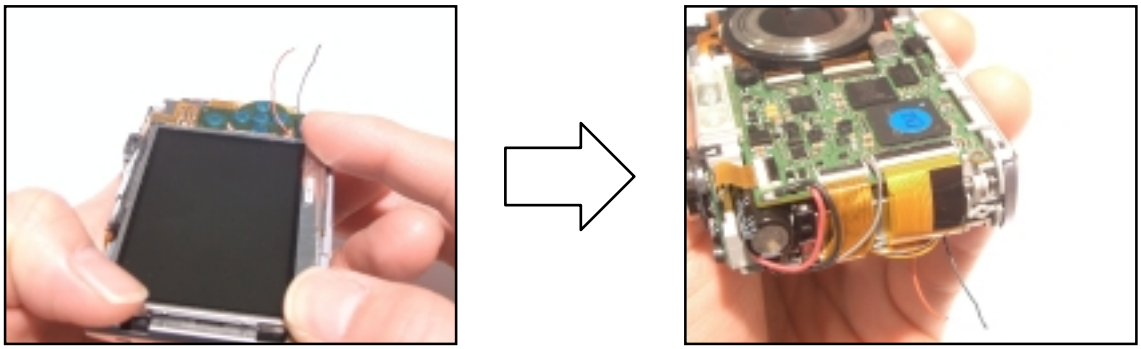


■ Assembling the LCD

12. Lead the FPC through the buttery box clearance.

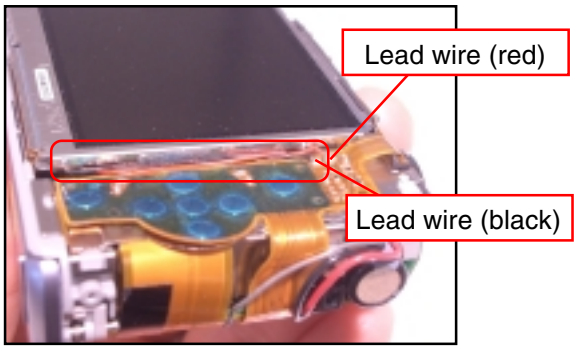


13. Fix the LCD with a double-sided tape and insert one FPC.



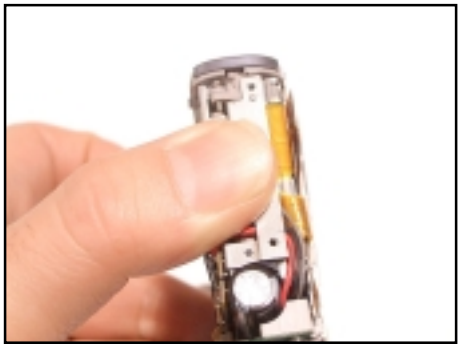
14. Solder tow lead wires.

* Wire the lead wires along the edge of the LCD.

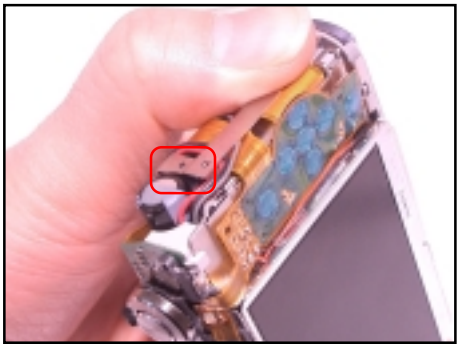


■ Assembling the clump board

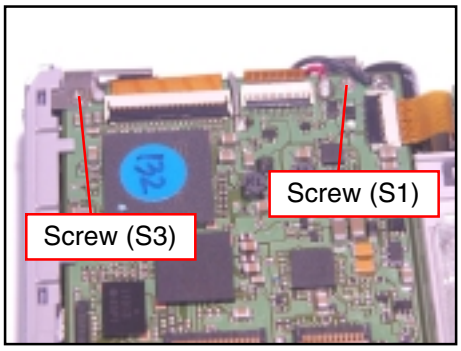
15. Set the clump board.



* Do not nip the lead wires.

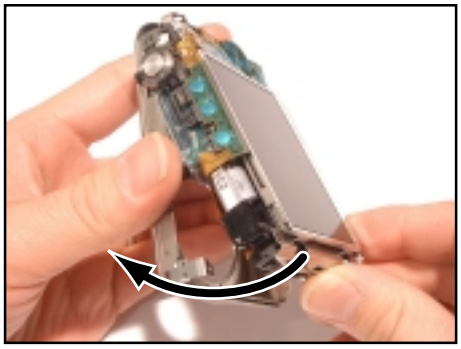


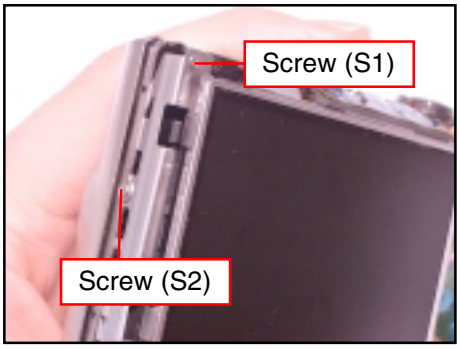
16. Fix with two screws.



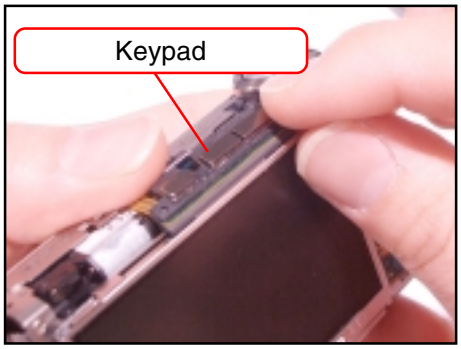
■ Assembling the case

17. Set the front case and fix it with two screws.



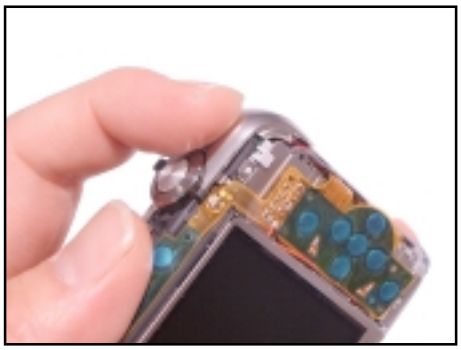


18. Set the keypad.

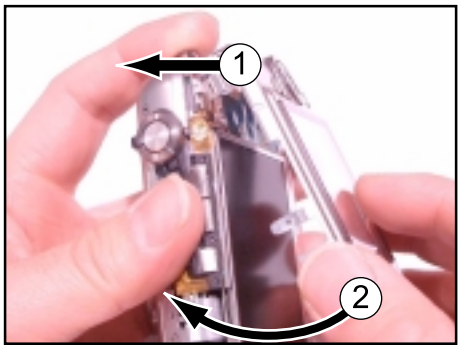


19.Set the center case (B).

20.Set the strap.

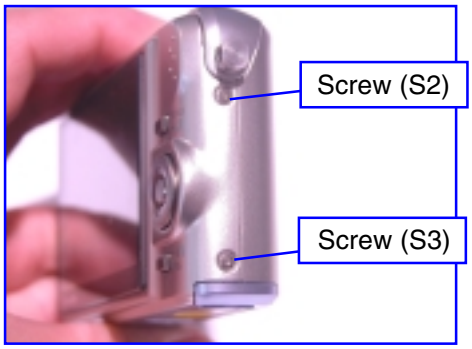


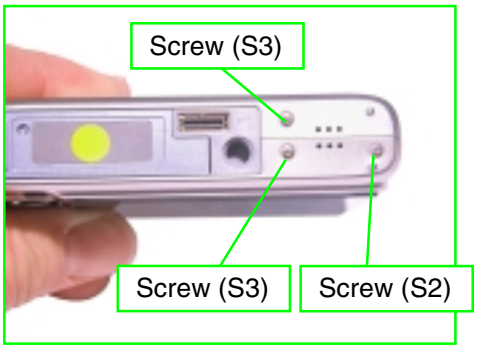
21. Set the rear case.



* Do not nip the lead wires.

22. Fix it with five screws.

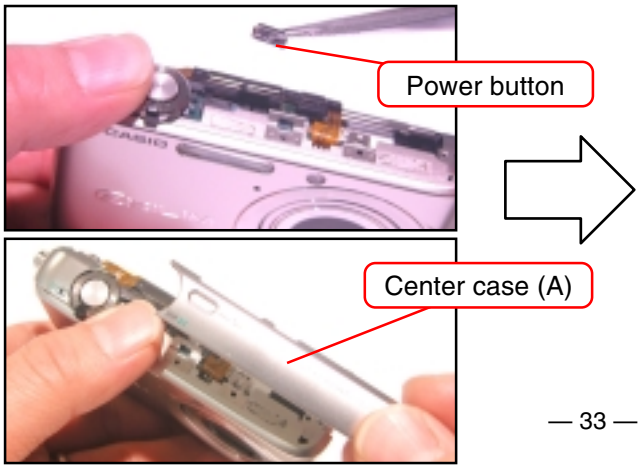




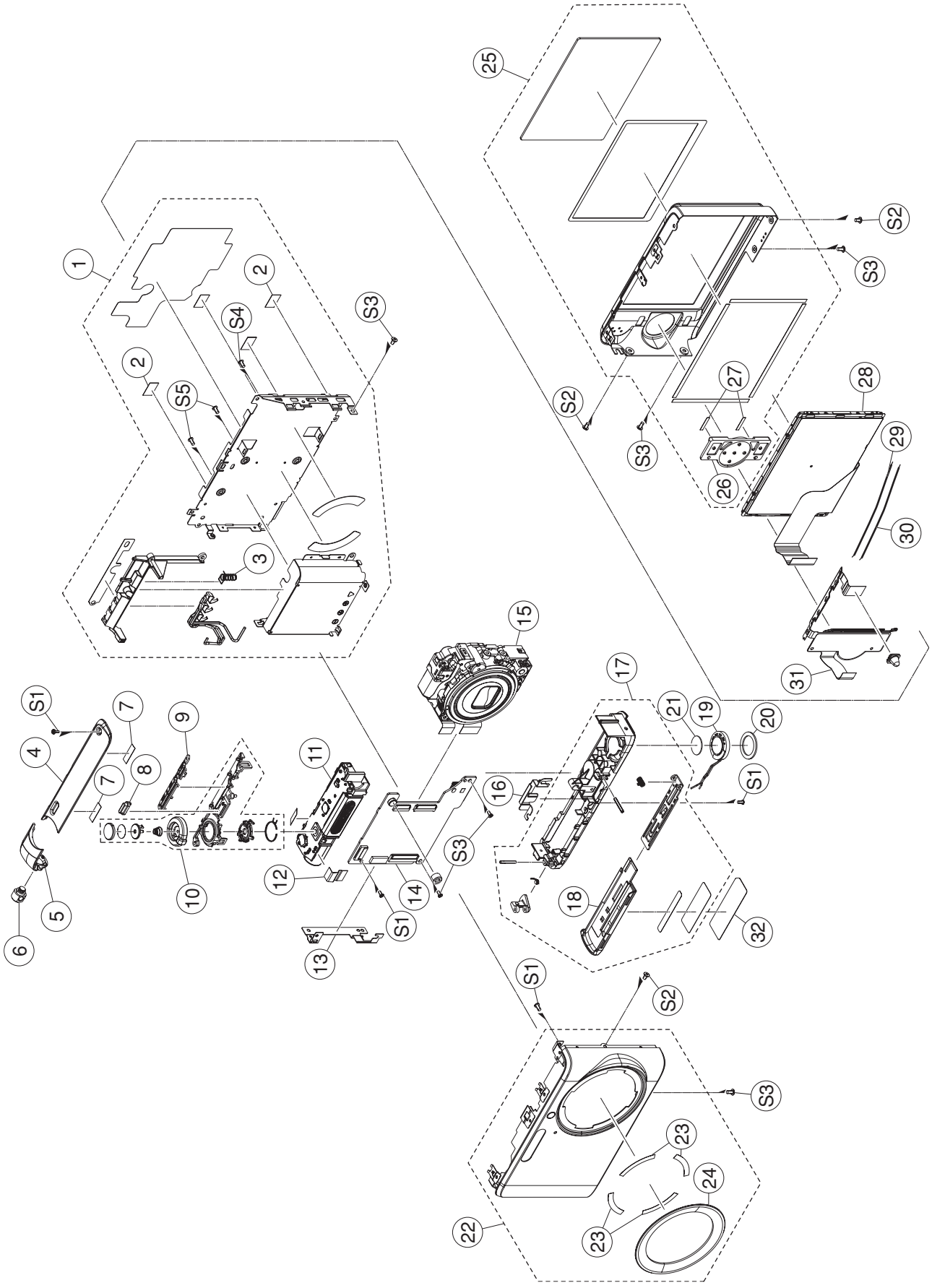
23. Set the power button.

24. Set the center case (A).

25. Fix it with one screw.



EXPLODED VIEW



PARTS LIST

N	Item	Parts Code	Parts Name	Specification	QTY	Price Code	R	Remark
N	1	10242103	BOX ASSY/BATTERY	RJK509022*001V02	1		C	
N	2	10241458	TAPE/LCD	RJK508890-006V01	2		X	
	3	10219347	SPRING/BATTERY	RJK507851-001V02	1		C	
N	4	10241438	CASE/CENTER/A	RJK509023-001V01	1		C	
N	5	10241439	CASE/CENTER/B	RJK509024-001V01	1		C	
N	6	10241441	STRAP BOARD	RJK508966-001V01	1		C	
N	7	10241440	TAPE	RJK508890-003V01	2		C	
N	8	10241467	BUTTON/POWER	RJK508969-001V01	1		C	
N	9	10242108	KEY	HKW1628-020010-S	1		C	
N	10	10241452	SHUT-SUB-ASSY	RJK509020*001V01	1		C	
N	11	10241447	STROBE UNIT	XEST-K800-S	1		C	
N	12	10241456	CABLE/STROBE	HKW1608-020010	1		X	
N	13	10241455	CLAMP BOARD	RJK509031-001V01	1		X	
N	14	10241960	PCB ASSY/MAIN	RJK509021*001 TK	1		A	
N	15	10241962	LENS UNIT	RJK509080*001 TK	1		A	*1
N	16	10241454	PLATE/CONNECTOR	RJK509011-001V01	1		X	
N	17	10241451	CASE ASSY/BOTTOM	RJK509019*001V01	1		C	
N	18	10241491	COVER/BATTERY	RJK508959-001V01	1		C	
	19	10234007	SPEAKER	YD-1352	1		X	
N	20	10241464	NET/SPEAKER	RJK508879-001V01	1		X	
N	21	10241463	TAPE/SPEAKER	RJK508880-001V01	1		X	
N	22	10241958	PANEL ASSY/FRONT	RJK509014*001 TK	1		C	
N	23	10241472	TAPE/CAM RING	RJK508974-001V01	4		C	
N	24	10241471	CAM RING	RJK508827-001V01	1		C	
N	25	10241959	PANEL ASSY/REAR	RJK509015*001 TK	1		C	
N	26	10242106	KEY	HKW1618-020010-S	1		X	
N	27	10241475	TAPE/KEY	RJK508890-004V01	2		X	
N	28	10241448	LCD UNIT	COM28T2856TLB	1		A	
N	29	10241465	CABLE/LCD	RJK508975-001V01	1		C	Red
N	30	10241466	CABLE/LCD	RJK508975-002V01	1		C	Black
N	31	10241453	FPC/KEY	SB-CAS5-A	1		C	
N	32	10243984	LABEL/RATING	RJK509056-002V01	1		X	
	S1	10203893	SCREW	RJK502836-011V01	4		X	
N	S2	10241435	SCREW	RJK509034-001V01	3		X	
N	S3	10241436	SCREW	RJK509008-001V01	6		X	
N	S4	10241461	SCREW	RJK508627-002V01	1		X	
	S5	10153233	SCREW	RJK506113-001V01	2			
	FU100	10196218	FUSE	FCC10801ABPA	1		C	
	FU101	10189324	FUSE	FCC10152ABPA	1		C	

N New parts

*1 Floppy disk is bundled.

*2 AC cord is not equipped.

*3 Blade type AC cord is equipped.

N	Item	Parts Code	Parts Name	Specification	QTY	Code	R	Remark
ACCESSORIES								
N	-	10243983	CD ROM	CK800DCA01R	1		C	
N	-	10242037	AV CABLE	AV-K800-BK15	1		C	
	-	10235765	USB CABLE	UC-K815-BK10-MB	1		C	
	-	10210351	AC CORD	CBL-K835-AC-EU-06	1		C	EU type
	-	10210354	AC CORD	CBL-K835-AC-UK-06	1		C	UK type
	-	10210360	AC CORD	CBL-K835-AC-TW-06	1		C	Blade type
	-	10210350	AC ADAPTOR	AD-C52G-WW	1		C	*2
	-	10211299	AC ADAPTOR	AD-C52J-WW	1		C	*3
N	-	10242036	CRADLE	R68-8209	1		C	
N	-	10242035	BATTERY/LI-ION	MK11-2875	1		B	
	-	10187367	STRAP	ST-K872-S	1		X	

N New parts

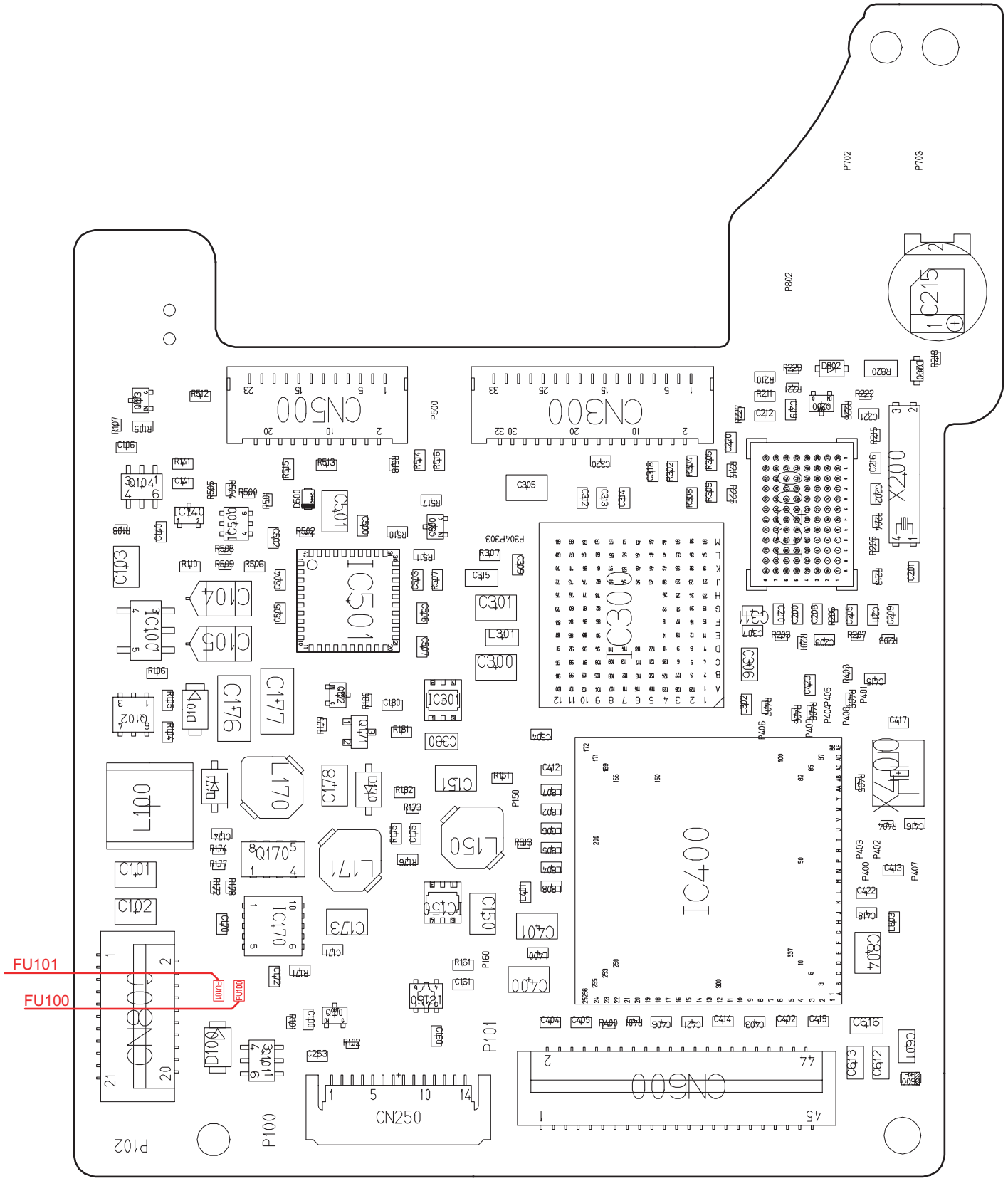
*1 Floppy disk is bundled.

*2 AC cord is not equipped.

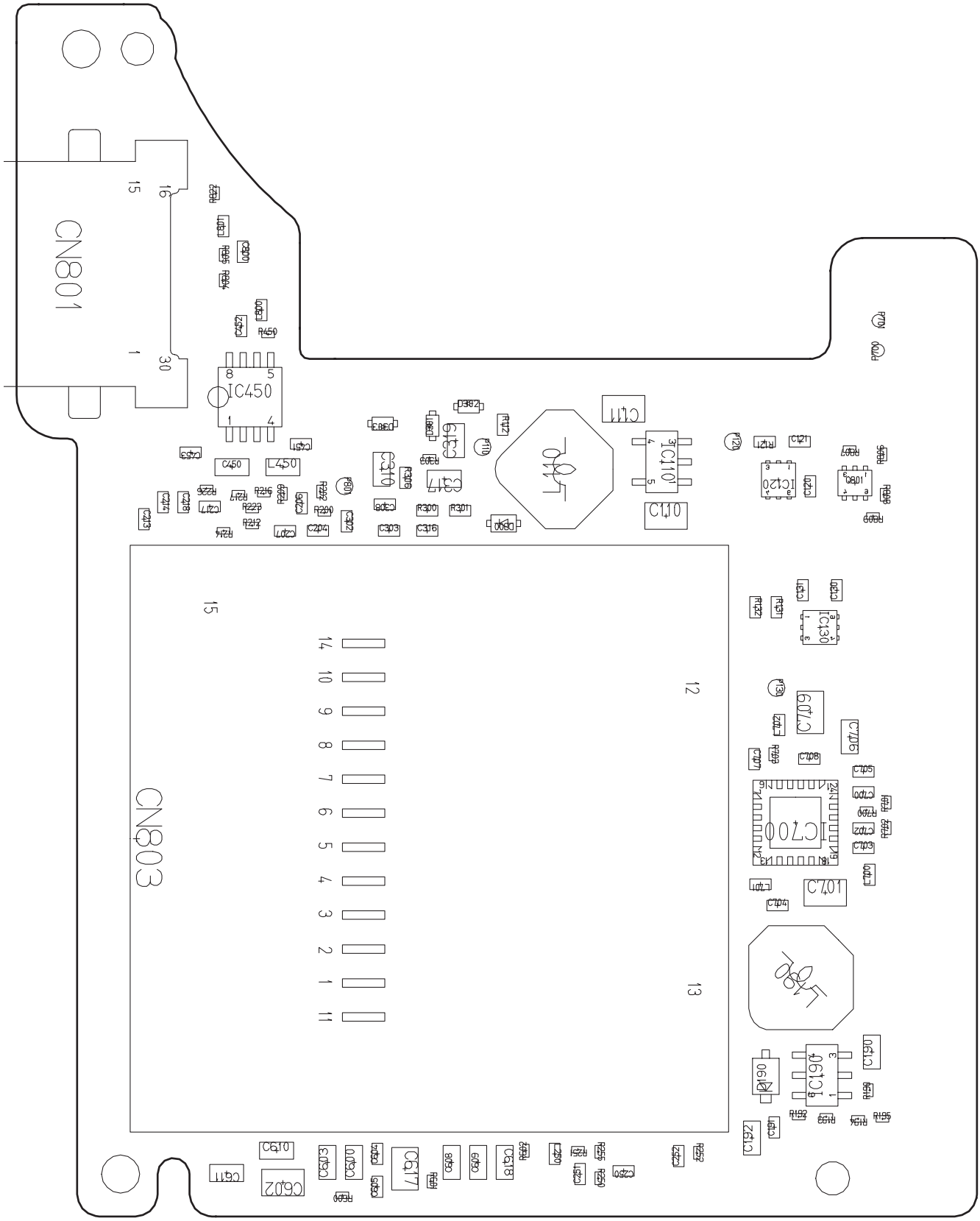
*3 Blade type AC cord is equipped.

PRINTED CIRCUIT BOARD

MAIN PCB (TOP VIEW)

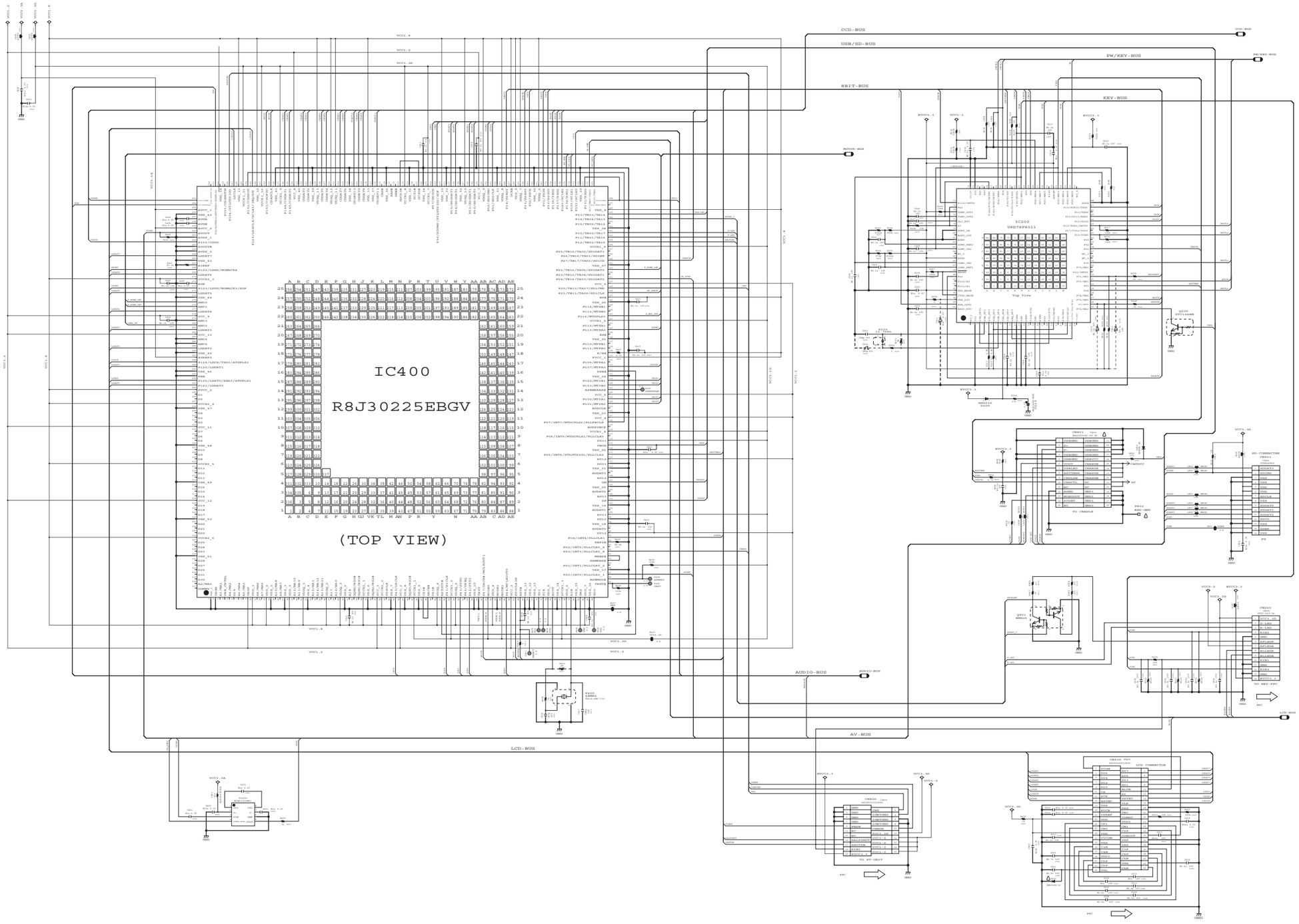


MAIN PCB (BOTTOM VIEW)

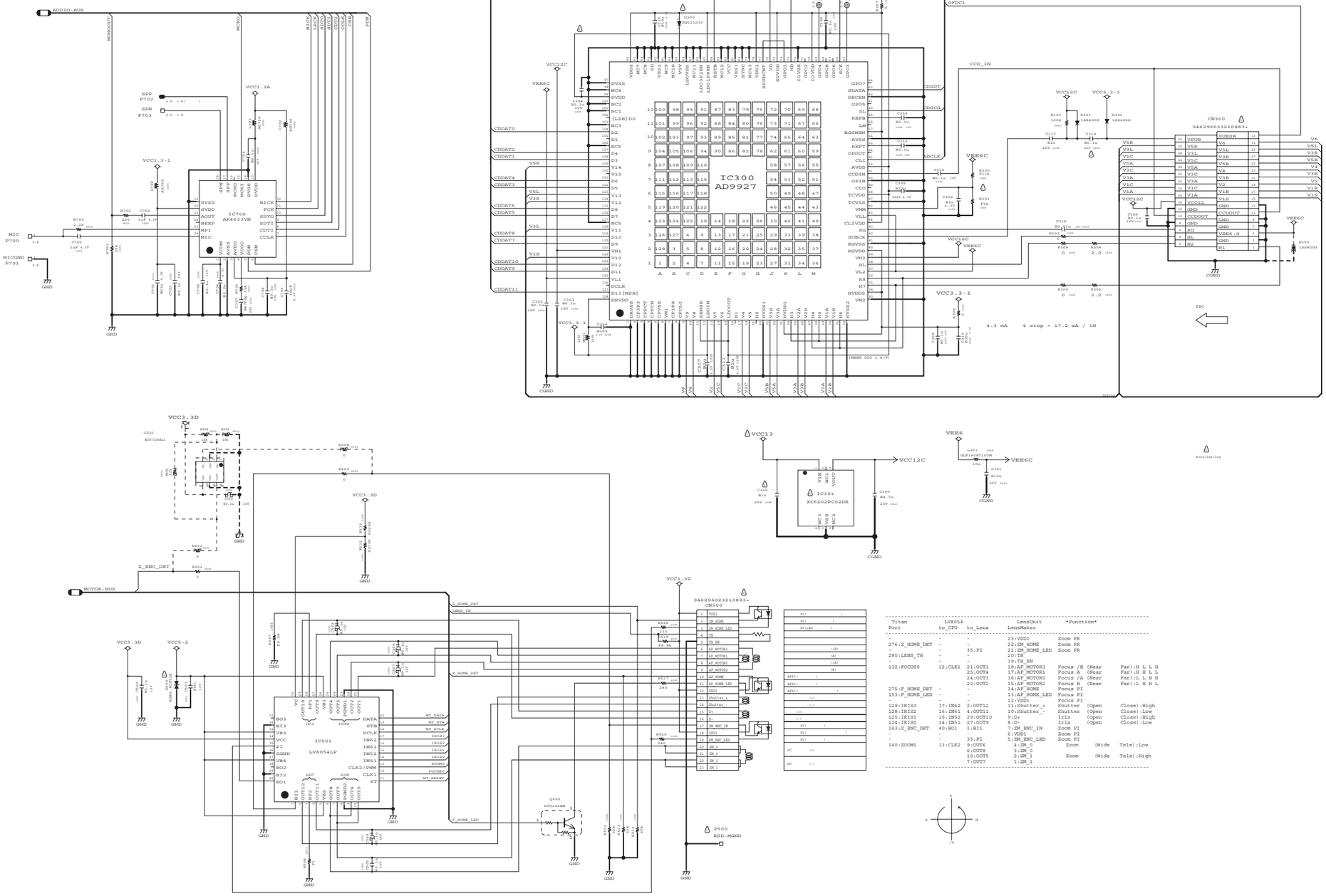


SCHEMATIC DIAGRAMS

MAIN PCB (1/3)

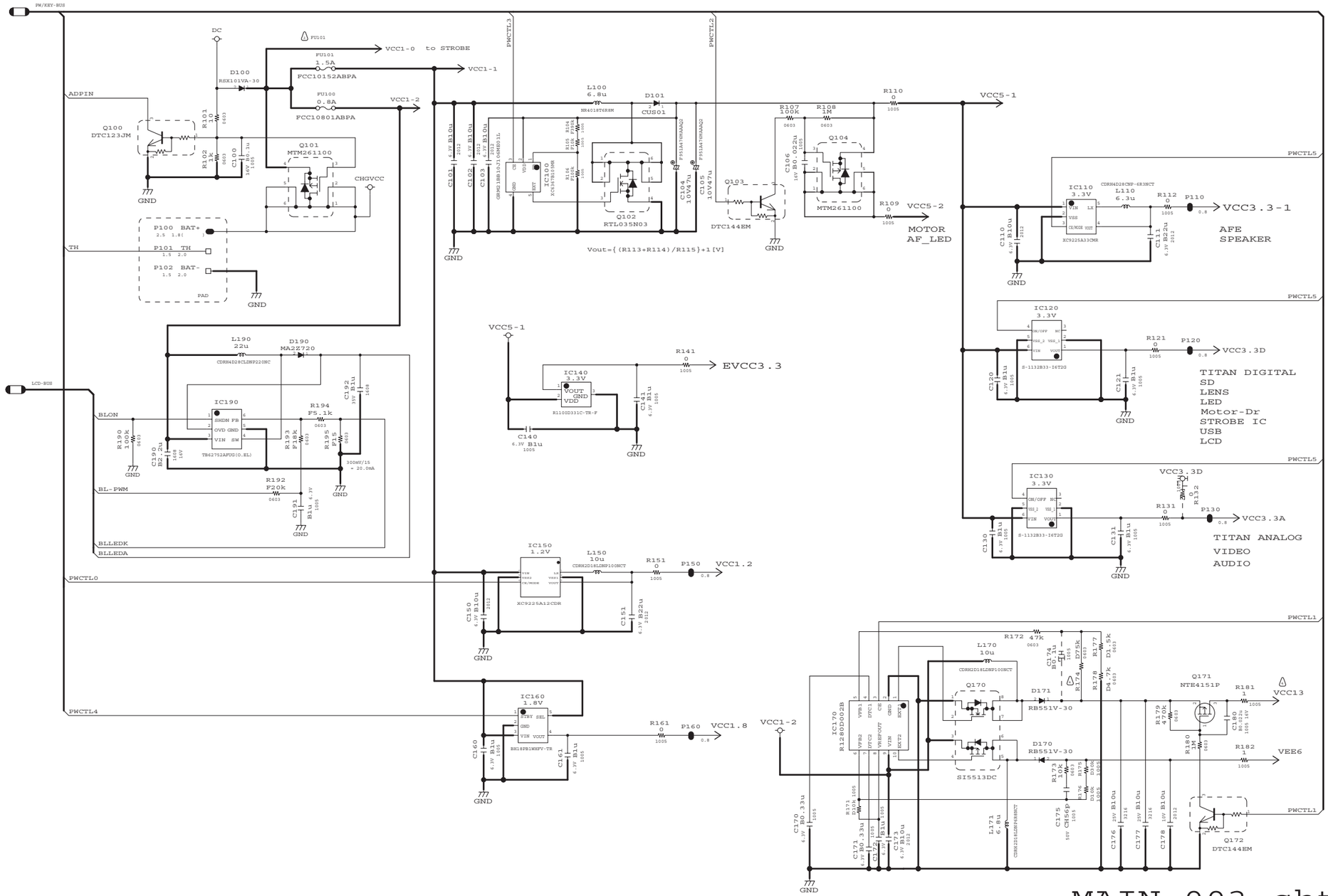


MAIN PCB (2/3)



Titan Port	LV8054 to_CPU	to_Lens	LensUnit LensMaker	*Function*	
-	-	-	23:VDD1	Zoom PR	
276:Z_HOME_DET	-	-	22:ZM_HOME	Zoom PR	
-	-	35:PI	21:ZM_HOME_LED	Zoom PR	
280:LENS_TH	-	-	20:TH		
-	-	-	19:TH_EN		
132:FOCUS0	12:CLK1	21:OUT1	18:AF_MOTOR3	Focus /B (Near	Far):H L L H
		25:OUT4	17:AF_MOTOR1	Focus A (Near	Far):H H L L
		24:OUT3	16:AF_MOTOR0	Focus /A (Near	Far):L L H H
		22:OUT2	15:AF_MOTOR2	Focus B (Near	Far):L H H L
275:F_HOME_DET	-	-	14:AF_HOME	Focus PI	
153:F_HOME_LED	-	-	13:AF_HOME_LED	Focus PI	
-	-	-	12:VDD1	Focus PI	
129:IRIS3	17:IN62	2:OUT12	11:Shutter_+	Shutter (Open	Close):High
128:IRIS2	16:IN61	4:OUT11	10:Shutter_-	Shutter (Open	Close):Low
125:IRIS1	15:IN52	29:OUT10	9:D+	Iris (Open	Close):High
124:IRIS0	14:IN51	27:OUT9	8:D-	Iris (Open	Close):Low
143:Z_ENC_DET	40:RO1	1:BI1	7:ZM_ENC_IN	Zoom PI	
-	-	-	6:VDD1	Zoom PI	
-	-	35:PI	5:ZM_ENC_LED	Zoom PI	
140:ZOOM0	13:CLK2	9:OUT6	4:ZM_0	Zoom (Wide	Tele):Low
		6:OUT8	3:ZM_0		
		10:OUT5	2:ZM_1	Zoom (Wide	Tele):High
		7:OUT7	1:ZM_1		

MAIN PCB (3/3)



MAIN_003.sht

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